

BRONCHIAL ASTHMA

ITS RELATION TO UPPER RESPIRATORY
TRACT INFECTION

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LONDON

H K LEWIS & Co Ltd.

1951

PRINTED IN GREAT BRITAIN
BY E. T. HEYON & CO. LTD. LONDON AND ESSEX.

FOREWORD

The work described in this book has been entirely clinical. It arose from an effort to clear up chronic nasal infection sufficiently to get and to keep the patient free of the trouble some symptoms which accompany it. The prompt and complete clearing up of each successive cold was found to be the best, and apparently the only effective means of doing this. That some of these cases had also suffered from asthma was unknown when treatment was first commenced. Their asthma however improved so markedly and each case of asthma subsequently treated in the same way improved with such regularity that in 1937 an Asthma Clinic was opened to determine to what extent a more exact treatment would clear it up. The results thus obtained were so satisfactory and seemed so important to the public health as to justify the investigation into its efficacy which is described in Chapter V.

The inescapable conclusions to be drawn from the thousand and more cases thus treated is that upper respiratory tract infection is the main underlying factor of practically all cases of bronchial asthma and the most important cause of this condition is the neglected cold.

My sincere thanks are due to the Mother Provincial and Sisters of the Little Company of Mary, who allowed me to open a Clinic for the treatment of asthma at their house.

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at Lewisham in 1937, to the Honourable C A Kelly Minister for Health and to Dr E S Morris, Director General of Public Health who after having had the results of this treatment investigated and having satisfied themselves as to the marked improvement in the general health of those who had undergone it made possible the enquiry mentioned above and to Dr J M Browne Kutschbach of London who in addition to having been generally interested in the publication of this book has given me valuable suggestions in regard to it and has kindly undertaken the arduous task of correcting proofs

The expenses of the enquiry mentioned in chapter V were defrayed by the Government of New South Wales

INTRODUCTION

Bronchial asthma which is the only form of asthma dealt with in this book has been defined as the reactions of an over excitable bronchial system to blood borne irritants and to reflex and psychical stimuli. This irritable bronchial system is often congenital and constitutes the Asthma Diathesis. The underlying factor in this diathesis was once looked upon as being mainly catarrhal but in recent years more stress has been laid on the allergic and psychosomatic aspects of the condition and treatment along these lines has been more popular with the medical profession.

With the general public however the search for any permanent relief from their asthma attacks and the general ill health which accompanies them seems to be as unsatisfactory as ever. In summing up the results of the different methods of treatment which have been advocated from time to time Sir Arthur Hurst* Chairman to the Medical Advisory Committee Asthma Research Council London finds them all to be equally unsatisfactory but thinks that every asthmatic can be benefited by good advice. He can be taught a way of life how to avoid the exciting causes of his particular brand of asthma how (by the self injections of adrenaline) to control attacks which he is unable to prevent and above all how to be happy in spite of the bad luck of having been born with the asthma diathesis.

In dealing with asthma the first and most obvious indication for treatment is to attempt some reduction in the

**Asthma in Childhood* B M J April 3 1943

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frequency and severity of the attacks. In practically all cases there are, however, other symptoms of ill health such as headaches, paroxysmal sneezing, cough, inability to eat certain foods and inhale certain irritants, tiredness, dyspnoea on exertion and a general unfitness to cope with the everyday affairs of life. In many cases these symptoms reduce the patients to a state of semi—or more or less complete invalidism—a state which cannot be attributed to the bronchial spasm itself. The treatment discussed in this book has not only markedly reduced and usually abolished the frequency and severity of the attacks but has brought about an even more pronounced relief of the accompanying symptoms of ill health. This has been the case in the great majority of those treated who were willing to be taught a new way of life—the avoidance, as far as possible, and the sensible treatment of colds.

The purpose of this book is fourfold: firstly, to bring evidence to show that chronic nasal catarrh (except in one or two of its specific forms) is the result of colds that have not been cleared up by adequate treatment in their acute stages and so allowed to run on and recur until a stage of persistent nasal and post nasal discharge (which may be described as a chronic cold) has been established.

Secondly, to outline a short hospital and more or less prolonged home treatment for nasal catarrh following the simple intra nasal opening of the antra, which experience has shown to be the main seat of infection.

Thirdly, to show the application of this treatment of nasal catarrh to patients suffering from hay fever and asthma and to make known the results obtained and deductions drawn from the treatment and prolonged observation of well over one thousand cases of asthma treated by this method alone.

Fourthly and above all, to show a simplified adaptation of this treatment to young children, which requires no

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hospitalization and can be carried out quite easily by the mother in the home. A description of this variation of the treatment and the results thereby obtained is given on page 120 *et seq* and more particularly on pages 146—152.

Asthma is an extremely frequent and distressing condition in children and it is the application of this treatment to them and the results obtained when so applied, that is of real importance. They will be considered in a later chapter. It is because of the supreme importance of any treatment that offers any opportunity of getting asthmatic children free of their disabilities and of enabling them to grow up as normal healthy beings, that this treatment has been persisted with in the face of the opposition which seems to be a necessary accompaniment of all innovations in medical treatment. It is fully realised that it could not be expected to be any less in a systematic treatment such as this, which however effective it will be shown to be, is often tedious to both patient and doctor alike.

Asthma is a highly controversial subject, and must be so because of its obscure etiology and the little that has so far been done for its relief. The object of this book, however, is not to enter into any controversy, but merely to describe a treatment that will certainly clear up nasal catarrh when properly carried out, and to record the results that have been observed in numerous cases of asthma when this has been done.

The belief that upper respiratory tract infection is the most important underlying factor in bronchial asthma is becoming more and more widely held. But surgical treatment of nasal sinusitis alone has not been found sufficient in itself to get and keep the nose free of infection and the patient free of asthma and of the other symptoms of chronic ill health which accompany it. In the numerous

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patients treated and kept under prolonged observation these results have only been obtained when each subsequent cold has been cleared up promptly and completely. It is with this clinical fact that this book is mainly concerned. When the treatment has been carried out exactly asthma and all other symptoms have been relieved with such striking regularity that the thesis is firmly held (1) that the *elimination of chronic nasal catarrh is the first and most important indication for treatment*, and all that is required in the great majority of all cases of hay fever and asthma and (2) that this catarrh is the result of neglected colds.

It is not for one moment pretended that the evidence derived from these observations is in itself sufficient to establish a universal truth. But it is maintained that sufficient evidence has been presented to show that it may be true, and any treatment that holds out a hope of continued relief for asthma is worthy of full investigation. Its efficacy cannot be decided by prejudice.

Lord Webb Johnson who came from London in recent years to give the Syme Oration before the Royal Australasian College of Surgeons in Australia, spoke of John Hunter as the founder of Scientific Surgery, and exhorted his listeners to follow what he called Hunter's 'inspiring watchword' 'Do not think, try the experiment'.

The importance of chronic nasal catarrh in those who suffer from asthma and the extent to which people who so suffer can be restored to normal health by any treatment that will clear it up effectively, is not a matter of what anyone thinks. It can be determined only by trying the experiment and observing the results with an impartial mind and by making an earnest effort to find out what can be done to make sick people better.

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BRONCHIAL ASTHMA

ITS RELATION TO UPPER RESPIRATORY TRACT INFECTION

CHAPTER ONE

NASAL CATARRH

NASAL catarrh has been defined as inflammation of the mucous membrane of the nasal cavities and accessory nasal sinuses, with free discharge. Acute conditions of this nature, such as influenza and the much more common cold, would be of little consequence if confined to the nasal cavities themselves. But the mucous membrane of the nose and the accessory sinuses are continuous and, in nearly all cases, a cold in the nose involves, to some extent, the sinuses as well. The secretion resulting from such infection is at first watery and highly irritating. A few days later it becomes mucoid and muco purulent. With the good ventilation and free drainage that exist in the nasal cavities themselves, inflammation there is easily remedied, but in the accessory sinuses there is always the probability of developing a chronic low-grade infection.

When accessory nasal sinuses are thus involved, the antra are by far the most important cavities affected. The position of the openings at the upper part of the cavities leads to retention of the products of inflammation which persist long after the acute stage of infection has passed. Even though on examination, this discharge may be found to be sterile it is still highly irritating to the mucous membrane lining the antra and, as a consequence of this irritation, still more

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infrequent cases is it ever the determining factor of a lower respiratory infection. Eradicating it alone, he says, will not clear up infected lungs. Some other specialists regard it more seriously, but are faced with the difficulty of finding an adequate treatment to put an end to it. Generally, the patients themselves regard it with much more concern, especially when, after trying various treatments, they find themselves still unrelieved of the discharge and the symptoms they ascribe to it.

As a result of the continued observation, during the last twenty five years, of patients suffering from chronic nasal discharge, the conclusion cannot be avoided that it is the cause of most of the ill health associated with nasal trouble and of a great deal of ill health which has never been associated with nasal infection at all.

The intimate connection between nasal catarrh and chronic chest conditions was first noticed by the author in the examination and treatment of Repatriation cases following the 1914-1918 war. A number of cases of chronic bronchitis were then referred for nasal examination and necessary treatment. In the great majority, their chronic chest condition was regarded as a possible result of gas inhaled in France, but not in sufficient quantity to invalid them at the time. In most of these cases, antral lavage showed gross evidence of antral infection and on the antra being opened either by intra nasal antrostomy or by some more radical operative procedure, some relief was usually obtained.

Sooner or later, however, practically all these cases returned to the same condition as prevailed before their nasal treatment was first undertaken, and it was on this account that a post operative treatment was begun in the hope of obtaining better and more lasting results. This after treatment at first consisted of regular antral lavage, which the patients were taught to do properly for themselves, and inhalations at stated intervals and for short periods.

discharge is secreted. The ethmoids, sphenoids and frontal sinuses are also involved in this low-grade infection but, as the natural openings into these cavities provide for better drainage, they are usually involved to a lesser degree.

During a cold the discharge from the infected antra, and similar discharge from the other sinuses, passes through the natural openings of these cavities into the nose. Some of it escapes by way of the anterior nares, but by far the greater amount passes through the posterior nares and drops down the naso pharynx as post nasal discharge. In the majority of cases another cold supervenes before this discharge clears up and the discharge becomes more abundant and more purulent, thus giving rise to the condition commonly known as chronic nasal catarrh.

The idea that this discharge is usually the result of mechanical obstruction in the nose resulting from septal deflection or spurs, is not supported in any way by the observation of the results obtained by the method of treatment to be discussed. This is considered more fully in the consideration of nasal obstruction on page 9. It is sufficient to say here that in this treatment of asthma, where the whole aim is to clear up the nasal discharge completely, the septum, however deflected, has never been interfered with except in those cases in which it has prevented access to the antra. In no case has it been thought that leaving it alone has ever made any difference to the patient's chance of getting better.

Post nasal discharge takes many forms, and it may be watery or viscous, mucoid, muco purulent or purulent, white, yellow, brown or greenish. The symptoms arising from it are a matter of controversy, and many specialists regard it as being entirely innocuous. A W Proetz* says that although it is commonly regarded with apprehension by patients, it is usually harmless, and that only in relatively

*Annals of Otolaryngology, and Laryngology 1945, 54, 739

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The statement* that only one type of discharge is capable of endangering health and that is one carrying virulent organisms and among the many cases (of nasal catarrh) examined this type is relatively infrequent is not in accordance with the experience of Pathological Departments in Australia. Pathologists making early morning examinations of the stomach contents of patients suffering from nasal catarrh have repeatedly found considerable amounts of mucus present which, in practically all cases contained numerous streptococci.

Nasal catarrh must be regarded as one of the most important of the focal infections. Infected tonsils and teeth may be dealt with promptly and removed by operation but sinus infections resulting from repeated colds cannot be eradicated by surgery and the only effective measures are often prolonged and tiresome to the patient and physician alike. As a result their treatment is only too often allowed to drift or is not attempted at all.

The conviction that chronic nasal catarrh is a common cause of chronic ill health is based on the repeated observation of the facts that (1) patients seeking treatment for chronic nasal trouble have almost invariably suffered from certain symptoms of ill health which were present in varying proportion and degree and (2) in those who undertook the treatment herein described and co-operated sufficiently to clear up their nasal and post nasal discharge these symptoms have almost invariably disappeared. When the co-operation was only sufficient to clear up some of the discharge the symptoms were always ameliorated although never entirely removed.

As might be expected in the treatment of any chronic illness not all who got better always stayed better as it was difficult to get all of them to continue to clear up each subsequent cold however occasional it might have become. But

*A. W. Proetz. *Annals of Otology Rhinology and Laryngology* 1945 54, 739

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Since then, this treatment has passed through various modifications and now, for some twenty years, has been standardised as a routine which has been employed in practically all cases of chronic nasal infection in the author's private and hospital practice. Definite instructions on how it is to be carried out have been given to each patient before the treatment has been begun, and no treatment has been given where any patient has not been able to give some reasonable assurance of his intention of doing it to the best of his ability. All those undergoing the treatment have been seen from time to time in order to give them any advice necessary to enable it to be carried out properly and to note its effect on special symptoms and general health.

At the same time, a number of people have been sufficiently interested to observe and report the results themselves. In the course of these interviews some who had sought treatment for purely local nasal conditions, referred time and again to improvement which had occurred in other and previously unmentioned, symptoms of their ill health. Among these occasionally, were paroxysmal sneezing, chronic bronchitis and asthma. As a result, a beginning was made some twenty years ago, to recommend this treatment to patients suffering from these chronic conditions when accompanied by catarrh. The results thus obtained were so good, and any ill effects so infrequent and unimportant, that since then all patients suffering from these chronic conditions have been advised to undergo this treatment as the one most likely to give permanent and satisfactory results, provided they would carry out a simple after treatment to clear up *their colds*.

Attempts to pass over chronic nasal discharge as merely an exaggeration of a natural and protective function of the nasal mucous membrane and to regard it as being harmless or perhaps even beneficial, are not borne out by my observations.

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on the top or at the back of the head. Sometimes, and very characteristically, it is at the back of the ears. Of twelve people examined consecutively with chronic nasal trouble twelve months ago, and afterwards operated on and then treated in the manner which will be described in detail later, seven complained of severe headaches varying in frequency from at least once or twice a week to practically every day. Six of these have had complete relief from this symptom since treatment and the seventh is a fair indication of the proportion of seven out of twelve who suffer from headaches and who have not been relieved by other treatment.

A type of headache commonly met with in association with chronic catarrh is the headache either caused or aggravated by reading or close work and not relieved by glasses. Attention was first drawn to this a number of years ago by two patients, one, a man of fifty, whose work necessitated constant reading, and a young girl who read mainly for pleasure. Both had been unable to read on account of headaches for many months, and both were agreeably surprised, a short time after treatment had begun, to find that they could then do so without any distress. In neither case had the symptom been mentioned beforehand. Since then, numerous patients complaining of the same condition but rarely to such a marked degree, have been treated, and in all cases their headaches have been relieved to much the same extent.

During the last twenty five years, numerous cases of chronic nasal trouble associated with troublesome headache have been treated. With the exception of some half-dozen who got no relief, it is no exaggeration to say that the great majority got free of their headaches and the others were very markedly improved and would almost certainly have been much more improved if they had given better attention to the treatment.

when they got better for a time and afterwards relapsed, it was clearly evident, in practically every case, that their symptoms had returned following the neglect of a cold or a series of colds with the consequent re establishment of their catarrh. And when they cleared this catarrh again and kept free of it by a better attention to treatment, they were invariably restored to health.

The signs and symptoms accompanying chronic catarrh

majority of patients have most of these symptoms and, occasionally one or other of them may predominate or may be absent. Other symptoms which may occur, but are not so frequently spoken of are the feeling of a heavy head with occasional attacks of dizziness, difficulty in concentration and varying degrees of shortness of breath on exertion. The symptoms given above may not be confined to sufferers from catarrh but when associated with it, will almost invariably disappear when the catarrh is removed. A considerable amount of doubt has been expressed from time to time as to how far some of these conditions, such as headache are due to nasal trouble and can be benefited by nasal treatment alone. It is not the intention here to make any dogmatic statements, but merely to state results as they have been observed in numerous cases over many years.

Other important symptoms frequently found among patients who suffer from chronic catarrh are chronic bronchitis, asthma and hay fever. It has been found that these symptoms almost invariably disappear when the nasal discharge is properly cleared up. They will be considered later.

Headache is a common symptom among those seeking treatment for chronic nasal catarrh. Frequently these headaches are severe and may occur daily or at longer intervals. The pain is sometimes confined to one side of the head, but more frequently it is general and may be frontal, or situated

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on the top or at the back of the head. Sometimes, and very characteristically, it is at the back of the ears. Of twelve people examined consecutively with chronic nasal trouble twelve months ago, and afterwards operated on and then treated in the manner which will be described in detail later, seven complained of severe headaches varying in frequency from at least once or twice a week to practically every day. Nine of these have had complete relief from this symptom since treatment, and the seventh is very much relieved. The proportion of seven out of twelve is a fair indication of the number of people with chronic nasal catarrh who are relieved from headaches and who have not been relieved by other treatment.

A type of headache commonly met with in association with chronic catarrh is the headache either caused or aggravated by reading or close work and not relieved by glasses. Attention was first drawn to this a number of years ago by two patients, one, a man of fifty, whose work necessitated constant reading, and a young girl who read mainly for pleasure. Both had been unable to read on account of headaches for many months, and both were agreeably surprised, a short time after treatment had begun, to find that they could then do so without any distress. In neither case had the symptom been mentioned beforehand. Since then, numerous patients complaining of the same condition, but rarely to such a marked degree, have been treated, and in all cases their headaches have been relieved to much the same extent.

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In most of these relief from headaches was obtained soon after the antra were opened but in others relief came more gradually. Sometimes it was weeks before the headaches disappeared and then only after a careful attention to inhalation treatment. In the latter cases those who awakened in the morning with a headache were advised to stay in bed inhaling till it was gone and those in whom it came on during the day were asked to begin inhalations at the first sign of it and to continue till it stopped. They were urged to do this even with their small headaches on the principle that if they looked after the small ones and thus cleared up their cause the bigger ones would not occur. Practically all of those who were willing to do this found that their headaches became increasingly less frequent and finally disappeared.

Some idea of the frequency with which severe and persistent headaches are associated with chronic nasal sinusitis can be gathered from the case histories given in this book. Numbers 5 7 11 12 16 and 17 are typical examples. At no time were any of these histories taken with any particular interest in the question of headaches. The symptoms noted were always those of which the patients most complained.

In practically every case these headaches disappeared after treatment. Of the ninety seven patients whose special investigation is recorded in Chapter V only one of those who suffered from severe and persistent headaches (and many of the ninety seven had done so for years) failed to get complete relief.

From the observations made it has been regarded as axiomatic that headaches that can be relieved by inhalations used in accordance with the method prescribed in this treatment are almost always secondary to chronic nasal sinusitis and can be relieved by effective treatment for that condition. Nevertheless even when they have been relieved for months or even years headaches sometimes return as the result of neglect of treatment i.e. the neglect of colds and the consequent re-establishment of chronic sinus infection. This fact

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applies equally to other symptoms which are secondary to this condition and which, once relieved, can always be relieved again by the proper use of inhalations. To avoid these relapses it is emphasised to the patient, once he has got better, that he must continue to clear up each cold completely even if it should then only occur—as colds usually do at this later stage—occasionally and in a mild form.

Nasal Obstruction is a common accompaniment of nasal catarrh, both in its acute form (whether this be regarded as due to allergy or to infection) and in the chronic form which is being discussed. In those treated, discharge in the nose has been found to be beyond any doubt the main cause of this obstruction. No hesitation is felt in stating that, apart from physical obstruction caused by polypi and new growths, it is by far the most important cause of all difficulties in breathing through the nose.

Any treatment that will clear up this discharge effectively will produce a clear nasal airway in practically all cases, and the presence of septal spurs and deflections has not been found to interfere with these results. In the examination of patients seeking relief for nasal obstruction, these mechanical obstructions are frequently found and have probably been present for some time although difficulty in breathing has been experienced much more recently. Frequently the history shows that the difficulty in breathing has been progressive as the catarrh developed. Time after time a marked septal deflection to one side is found on examination, but the patient still complains of obstruction in both nostrils although the other side has the appearance of being more than usually free.

In chronic nasal catarrh, the mere removal of spurs and deflections may improve the airway. But, as it is found that the removal of the nasal discharge will itself produce this result and much more completely, it has been the practice many years to leave these physical ob-

alone, except when they have been so marked as to prevent access to infected sinuses. Many cases have been dealt with in this way and, where patients have been prepared to co-operate in the reasonable control of subsequent colds, the airway has become quite clear even in those who have septal spurs and deflections to a marked degree.

Enlarged inferior turbinates may also cause some nasal obstruction but inferior turbinates have always been left severely alone. Their presence does not interfere with access to the antra and as the enlargement is frequently the result of the continual irritation of the chronic nasal discharge it generally subsides with the disappearance of the discharge itself.

Diminution or complete loss of sense of smell is often met with in people suffering from chronic nasal catarrh. That it is the result of the catarrh is shown by the fact that in practically all cases where it has existed before treatment it has improved shortly after treatment has begun. And in those who have cleared up their catarrh in the manner required, their sense of smell has invariably been restored.

Gastric Disturbances are frequently complained of by patients seeking relief for chronic nasal catarrh. Sometimes they complain of chronic indigestion with, perhaps, flatulence and heartburn, and frequently of periodic bilious attacks. By far the most common complaint is loss of appetite and a *feeling of nausea which varies in intensity in different subjects*. Sometimes it is noticed only occasionally and some times repeatedly throughout the day, but most commonly it is troublesome in the early morning and accompanied by a disinclination for breakfast. This disinclination for breakfast is a common symptom in chronic nasal catarrh. Tea and toast becomes much more the habit than the full breakfast usually taken in Australia. The flow of muco purulent discharge into the stomach, which is known to occur in these cases seems quite sufficient in itself to account for the

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repeated feeling of nausea and the disinclination for the early morning meal. This is easily understood when one considers the amount of muco purulent discharge that has been found repeatedly in the examination of the early morning stomach contents of patients suffering from nasal catarrh.

If any further proof were needed that this post nasal discharge is a direct and extremely common cause of functional stomach trouble it is found in the regularity with which these patients after effective nasal treatment report that their nausea has disappeared that they are putting on weight instead of losing it that their appetite has markedly improved that their bilious attacks have ceased and that they now enjoy a healthy breakfast and no longer feel sick in trains trams and cars.

Symptoms are usually urgent
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causes but one certain and common cause is the presence of nasal discharge in the stomach. In those in whom this feeling of sickness has been associated with nasal catarrh it has almost invariably disappeared after effective treatment of the nose by the method herein described. Appetites which were poor or variable before treatment generally improved to a marked degree afterwards even when some discharge still persisted—a fact that was probably due to the discharge having been made less irritating by the treatment employed.

Bilious attacks must be specially referred to. They have been noted so frequently in the histories of sufferers from nasal catarrh that where they have been occurring at intervals for years that fact alone has been taken as indicating that nasal catarrh has been a prominent condition for at least the same length of time. Those who have been troubled with them before treatment have almost invariably been relieved of them afterwards when they have carried it out as required.

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by discharge running down the back of the throat as in practically all cases it disappeared promptly with effective nasal treatment

A feeling of continual **Tiredness** was complained of in nearly all cases and was sometimes present to a marked degree. This tiredness can be regarded as a natural result of the chronic toxæmia which had been present for indefinite periods and it improved as the cause was removed. The relief of this particular symptom however was always slow

Shortness of Breath on exertion was also a common symptom which improved with effective treatment. It will be referred to more fully in the consideration of asthma

Attacks of **Dizziness** are commonly complained of by people suffering from nasal catarrh. The attacks usually occur on stooping but may however be much more trouble some than this and interfere with the person's activities

Emotional Instability is a common symptom of the present day and is frequently associated with chronic toxæmia. It is not surprising that at least half of the patients seen complained of nerviness and spoke of considerable improvement after their catarrh had been cleared up. One striking feature was the prevalence of irritability of temper. Once the association of this symptom with chronic catarrh was noticed it was always inquired about and in the great majority of cases was admitted both by the patients and their friends. In a surprising number of cases there was no need to inquire about it as it was freely commented upon by the friends and often by the patients themselves. In practically every case where it was a marked feature definite improvement was afterwards noticed and reported once the toxic absorption from the nose had been eliminated

In those who have been relieved by treatment the onset of a bilious attack has always been taken to indicate that a cold has been neglected and catarrh allowed to become re-established and the subsequent history has invariably shown this to be true. In the treatment of asthma any such onset is taken to indicate increased nasal discharge (that is the presence of a cold) and it is laid down that the patients must go to bed immediately and treat this cold accordingly. An example of what has been noted in numerous cases is given in case history No 12.

Disinclination for certain articles of food is a symptom repeatedly met with in chronic nasal catarrh and is still more frequently met with when it is associated with asthma. This is especially so in children. The most common of these articles are probably animal fats such as cream pork and all fried foods but there are also various others such as bananas etc. This faddiness may be due to the association of the ingestion of these articles of food with subsequent nausea and biliousness or even with asthma attacks. Or possibly to some other reason. But its intimate association with the presence of post nasal discharge in the stomach cannot be doubted as when present before treatment it has almost invariably disappeared once the discharge has ceased.

Whatever the various causes of bilious attacks may be the commonest is undoubtedly chronic nasal catarrh and its effective treatment the most certain way of getting rid of them.

Troublesome Cough, by which is meant a cough which recurs with sufficient frequency during the day as to be a source of distress to the patient or so persistently at night as to interfere with sleep was complained of by about half of the patients examined. (This cough was present quite apart from any association with bronchitis which itself is also commonly secondary to nasal catarrh.) It was undoubtedly due to the laryngeal and bronchial irritation caused

N A S A L C A T A R R H

by discharge running down the back of the throat as in practically all cases it disappeared promptly with effective nasal treatment

A feeling of continual **Tiredness** was complained of in nearly all cases and was sometimes present to a marked degree. This tiredness can be regarded as a natural result of the chronic toxæmia which had been present for indefinite periods and it improved as the cause was removed. The relief of this particular symptom however was always slow.

Shortness of Breath on exertion was also a common symptom which improved with effective treatment. It will be referred to more fully in the consideration of asthma.

Attacks of **Dizziness** are commonly complained of by people suffering from nasal catarrh. The attacks usually occur on stooping but may however be much more trouble some than this and interfere with the person's activities.

Emotional Instability is a common symptom of the present day and is frequently associated with chronic toxæmia. It is not surprising that at least half of the patients seen complained of nerviness and spoke of considerable improvement after their catarrh had been cleared up. One striking feature was the prevalence of irritability of temper. Once the association of this symptom with chronic catarrh was noticed it was always inquired about and in the great majority of cases was admitted both by the patients and their friends. In a surprising number of cases there was no need to inquire about it as it was freely commented upon by the friends and often by the patients themselves. In practically every case where it was a marked feature definite improvement was afterwards noticed and reported once the toxic absorption from the nose had been eliminated.

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Sneezing may be the result of reflex action, e.g., strong sunlight falling on the conjunctiva, or of other causes, but the main cause is direct irritation of the nasal mucosa. An everyday example of this is the acute sneezing attacks seen in the early stages of the common cold when the mucosa is constantly irritated by the profuse, watery discharge. Paroxysms of sneezing also occur in most cases of chronic nasal catarrh, where the mucous membrane is kept in a state of over excitability by the continual nasal discharge and where very little extra irritation is necessary to produce an attack. It will be discussed more fully in Chapter VI.

A Pasty appearance of the Skin of the face is present so frequently in nasal infection that it may be taken as characteristic of the condition. That it is the result of the underlying infection seems to be beyond all doubt as it disappears in practically all cases once the nasal discharge ceases. The colour improves soon after the antra are opened and before the patient leaves hospital, the skin generally has a markedly healthy tinge. That this change is not the result of the rest in bed is indicated by the fact that when the patient returns home and develops another cold even though he is still confined to bed, as is the case in asthma, this pastiness returns and only disappears again as the cold clears up. It also returns to some extent with every repeated cold and disappears with the disappearance of the discharge. It is generally accompanied by a heavy, watery look about the eyes which also comes and goes in the same way.

These two together—the pasty skin and heavy looking eyes—are usually a reliable indication of how far colds have been cleared up. When undergoing bed treatment for a cold no one is allowed out of bed if possible, while this appearance still persists and no one undergoing treatment is ever regarded as being completely better until the skin of the face looks healthy and the eyes clear. This change in the appearance of the skin and eyes is also a very useful indication

NASAL CATARRH

in the early days of treatment of a cold that is developing and especially so in children. Mothers are instructed to put a child to bed at the first appearance of even looking off colour and, although when this was done it was occasionally found that no cold was developing in practically all cases it was the means of getting colds treated early and cleared up with fewer days in bed.

Chronic nasal catarrh is one of the most common ailments of the present day. Numerous other symptoms apart from those mentioned are probably ascribed to it by those who suffer from it, but those given here are those most commonly complained of. As they disappear when the catarrh is removed and return to some extent with each subsequent cold and tend to persist when that cold is neglected with the consequential re-establishment of nasal and post nasal discharge there seems to be little reason to doubt that they are directly secondary to it.

On the other hand when occasional colds are cleared up promptly and effectively by reasonable treatment neither catarrh nor these symptoms persist. These facts have been observed so often that every justification is felt for the opinion that catarrh is the result of neglected colds and that it is undoubtedly the cause of a very large amount of the chronic ill health of the present day.

That this catarrh with its accompanying symptoms of ill health can be removed by the treatment described in the next chapter is beyond any doubt. The treatment causes very little distress as the minor operative procedure and the subsequent hospital treatment give rise to practically no discomfort. It would certainly be better if the same results could be obtained by operation alone or by some drug or vaccine treatment as that would entail no necessity to seek the patient's co-operation. But it would be infinitely better still if people could be taught in their childhood the importance of stopping colds and of so preventing the development of catarrh at all.

BRONCHIAL ASTHMA

The only way to make sure of building up immunity to colds is by stopping each one promptly and effectively, as it occurs. A high degree of immunity can always be built up in this way and it is probably the only way in which it can be done. Case history No 11 and that of M C given on page 127 are characteristic of what has been observed time after time. They show two patients who suffered from continual colds and profuse nasal discharge for years, with a consequent state of health that can well be described as semi invalidism. And yet, within a reasonable time they had cleared up this discharge, regained their health and acquired an immunity to colds which enabled them to go for periods of twelve months and more without any sign of a cold at all.

If colds and nasal catarrh can be controlled in this manner and both the amount of time that is lost on their account, and the chronic ill health that goes with them can thus be reduced to a minimum, then steps should be taken immediately to counteract the general teaching that a cold in the head may be treated with impunity and that nasal catarrh is an everyday condition that should be ignored.

CHAPTER TWO

TREATMENT OF NASAL CATARRH

The method of treatment for chronic nasal catarrh will now be explained. It cannot be emphasised too often that the required results have been obtained only by strict attention to the details of the treatment as set out below. Operations on antra alone have never been found to be productive of sufficiently satisfactory results.

(1) The patient goes into hospital and remains there for fourteen days during which time the operative procedure discussed in the following paragraph is carried out. During the first twelve days the patient is confined strictly to bed. Inhalations given as described below are begun immediately and continued as far as possible during the greater part of each day. The object of this confinement to bed and continued inhalations is to attempt to clear up the nasal discharge in exactly the same way as attempts would be made to clear it in a patient suffering from an acute cold.

(2) **Operative Treatment** Intra nasal openings into both maxillary sinuses are made after the patient has been in hospital from twenty four to forty-eight hours. These openings made below the inferior turbinate bones should be made as large as possible as they tend to close to some extent during the first few weeks. No part of the inferior turbinate bone is removed and there is no interference with the mucous membrane lining the sinus cavity. The aim should be to make these openings permanent. Both intra are always opened at the same time. Cases have rarely been seen in which one antrum was looked upon

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as being definitely infected and the other quite clear, and in the few cases in which only one has been opened the required results have not been obtained

For patients over fifteen years of age, local anaesthesia is ideal. Of those needing a general anaesthetic, the greater number have been given ether. The method employed is to give the general anaesthetic until the patient is sufficiently quiet to allow the introduction of an intra nasal pack of cocaine and adrenaline to control the bleeding. Seven to eight minutes later, the operation is carried out and with a practically dry field. A light anaesthetic is all that is necessary. The corneal reflexes are generally retained, and when the operation is finished the patient is nearly always sufficiently awake to answer questions before being removed from the operating table. Any bleeding during the operation is removed by suction, and no post operative pack is required.

When returned to bed the patient experiences very little inconvenience following this operation, except in the case of those in whom every abnormal symptom is interpreted as a pain. With an experienced nurse, the washing of the antra causes practically no pain and the majority seem always ready to admit that they have suffered no distress at all. Post operative complications are extremely rare, and the mortality rate has so far been nil. The most serious complications which have been seen in the treatment of thousands of patients during the last twenty five years have been two cases of acute mastoiditis needing operation, and some half dozen mild cases of pneumonia.

A complication occurring occasionally is a slight rise of temperature 1 day or two after operation, with the symptoms of a cold in the head and perhaps some soreness in the throat. This gives very little trouble to the patient and attention is generally drawn to it by a glance at the temperature chart. It subsides rapidly under treatment with sulphadiazine. Another occasional complication, but one

TREATMENT OF NASAL CATARRH

which can be reduced to a minimum by giving the patient careful instructions not to blow his nose while in hospital, is acute otitis media, which has given no trouble and left no traces after prompt paracentesis. Except in the rarest cases, all patients have left hospital within the specified two weeks. The greater number of these complications have occurred in patients treated in wards specially set apart for Ear, Nose and Throat cases. When the treatment has been carried out in general medical or surgical wards complications have been extremely rare.

Subsequent nasal operation of any kind has rarely been found necessary for patients operated on in this way if they have been prepared to co-operate in a simple after treatment to stop their colds. On rare occasions, however, it has been found necessary to re-curette the opening into the antrum when the introduction of a catheter has become difficult in a person who, by neglecting his colds, has allowed his catarrh to return.

No patient has been seen who seemed to be in any way the worse for having had his maxillary sinuses opened in this way.

The after treatment itself is given below in two sections (a) and (b). Case histories show that the patient's general health and special symptoms vary in accordance with the amount of nasal and post nasal discharge. The object of treatment is to put an end to this discharge and then, as far as possible, to keep it from recurring.

No observations have so far warranted the assumption that nasal operation alone will produce the required results. As has already been said the opinion is firmly held that nasal catarrh, except in one or two rare specific forms, starts with acute rhinitis or the common cold, and is kept going by subsequent colds which in many patients become simply acute exacerbations of a chronic condition. Failure to treat each cold promptly and completely by appropriate

is the main cause of this chronic condition and, no matter how much relief a patient may receive from antral operation, the first neglected cold starts him on the downward track, and by repeated neglect, chronic nasal infection and its accompanying symptoms become re established

This has been found to be the case whether the antral operation is simple or radical. Consequently, it has been found that simple intra nasal antrostomy, with appropriate after treatment properly carried out, has been quite sufficient to get the patient free of symptoms in all cases of antral infection. Over a period of years it has not been found necessary to perform any operation of a more radical nature. In a number of those who have had radical operations elsewhere and sometimes repeated operation without obtaining the relief they sought the ordinary routine treatment herein described has been advised without any further surgical procedure provided that the antra were still open. In practically all of these cases the desired relief has been obtained.

Although it is felt that the after-treatment is all important, the preliminary intra nasal antrostomy is still considered necessary as without it it has been found impossible to get the results required or, at least, to get them within a reasonable time. Before undertaking it, however, patients are told that they cannot expect full results from the operation itself, but only from proper attention to subsequent colds. The results of treatment would probably be better still if all the infected sinuses could be opened in the same simple manner, but this is impracticable. The advisability of opening the antra however, seems to be beyond all question. In the treatment of gross nasal sinusitis it seems to be a truism that if the antra can be made healthy, there is every opportunity of getting the other sinuses healthy also, and of getting the patient better. Once the antra have been opened this recovery may sometimes be achieved by inhalations and the after treatment of colds, and without any further operation on the other infected sinuses at all. But, unless infected

TREATMENT OF NASAL CATARRH

antra are cleared up first operative procedures on the other sinuses have rarely been observed to produce fully satisfactory results

DETAILS OF AFTER TREATMENT

(a) The maxillary sinuses are best washed out as soon as possible after they have been opened. When local anaesthesia is employed this lavage takes place while the patient is still in the theatre. After a general anaesthetic it is done when the patient is sufficiently recovered to sit up and give the necessary assistance for it to be carried out. It is then continued during the patient's stay in hospital every day or every second day according to the amount of nasal discharge. The lotion used for lavage is always normal saline.

Post operative antrum lavage has been found to be a valuable therapeutic measure in the treatment of nasal catarrh both while the patient is in hospital and at any time when a cold develops after the patient has been discharged.

The correct way of doing it is therefore highly important. It has been customary to instruct the nurse in charge carefully in this technique to ensure that the catheter is introduced properly into the cavity and with the least distress to the patient. For some eighteen years all those undergoing this treatment in both private and in general hospital practice were taught how to do it for themselves. Teaching the patient the correct method is often extremely tedious but it is well worth while. An occasional lavage hastens convalescence and is valuable in the treatment of subsequent colds.

In the acute stages of a cold with a profuse watery irritating discharge a great deal of comfort and benefit can be derived from washing out the antra first thing in the morning last thing at night and once or perhaps twice throughout the day. Colds treated in this way seem to clear up more quickly and to leave less post nasal discharge. After the first two or three days the lavage can be done once or

twice a day whichever is most comfortable, till the cold is better and then discontinued until another cold seems about to begin

Most patients derive a great deal of comfort from intrum lavage but a few have the peculiarity that continued washing of the nose tends to increase the amount of nasal discharge. The first thing noticed in these people is a feeling of a more stuffed up nose or, in a nose that was previously clear the feeling of a cold in the head. Once either of these symptoms is experienced the patient is instructed to discontinue the lavage and to depend on other measures for relief

(b) Inhalations have been found to be the most important therapeutic measure for the purpose of clearing up nasal discharge. In the early days they were given as strong menthol inhalations from a jug for about fifteen minutes every four hours. This procedure passed through various modifications till the present method was evolved some twenty years ago. The mixture used is —

Menthol 1 drachm
Eucalyptol 1 drachm
Ol Lavandulae minims 10
Sp Vin Rect to 1 ounce

To use it the patient sitting up in bed holds a one pint thermos flask filled with hot water between the arm and the chest adds a few drops of the mixture and then inhales without any covering of any kind over the head or the face. When the smell of menthol becomes too weak which is roughly in fifteen to twenty minutes time a few more drops of the mixture are added. When the water becomes too cool it is replaced by fresh hot water. The advantage of the thermos flask is that the water keeps sufficiently warm for a much longer period—about two hours—and the vapour does not irritate the patient's eyes. Once it is tucked under the patient can etc.

TREATMENT OF NASAL CATARRH

To obtain the required results two conditions are essential—the inhalation must be weak and it must be prolonged. By weak it is meant that the inhalation must be held at such a distance from the face that the patient is conscious of a smell of menthol but that there is no irritation of the eyes or nose. The inhalation must also be prolonged and the usual practice is to get the patient to inhale for as long as possible during his waking hours. This is not difficult as the method employed is in no way uncomfortable and most people find the smell fresh and pleasant.

The amount of good derived from the inhalations seems to be in proportion to the length of time they are used but in using them there are two precautions that must be strictly observed. In holding the flask for prolonged periods the patient may possibly fall asleep and the contents of the flask spill on both him and the bed. To avoid trouble if this should happen the water in the flask must never be sufficiently hot to burn the skin if spilt. The best way of being sure of this is to hold a finger in the water for several seconds before giving the flask to the patient. The second precaution is not to make the inhalation too strong by holding the flask too close to the face. Headache is uncommon after this operation but when complained of is found in the great majority of cases to be the result of the patient being too close to the flask. Frequently a patient will contend that he is sure that this is not the cause of his headache but once he can be got to keep it further away the headache almost invariably disappears.

It is highly important that patients should be taught the proper way to inhale and it is by no means sufficient to give them a mixture and tell them to do so. For correct inhalation the two weeks stay in hospital under the supervision of a capable nurse is extremely useful. The patients are taught there how to use the inhalations, are encouraged to use them for prolonged periods and in two weeks time are usually so convinced of their good effect that they

quite willing to keep on with them. Occasionally they have to be restrained from using them too often. Another advantage gained from the two weeks' stay in hospital is that each patient learns what is meant by confinement to bed. In hospital he is kept under supervision whereas if left to carry out the treatment at home, he would probably be getting in and out of bed just as he felt inclined, and so run the risk of further colds.

When he leaves hospital and is able to get about he is advised to use the inhalation during the first two weeks for one or two hours each morning, stopping it for half an hour before getting out of bed, and to use it again in the evening on returning to bed for two or three hours before going to sleep. For the next four to six weeks, he should use it while in bed for at least two to three hours a day. After that he is advised not to inhale as a routine measure but to do so immediately if he notices the return of any of his former symptoms such as headache, stuffed up nose, the feeling of having more nasal discharge, etc., and to continue inhaling until these symptoms have disappeared, or once a cold shows definite signs of beginning, to go to bed and inhale more or less continuously until the cold has cleared up.

Inhalation from a thermos flask has been found the most satisfactory means of inhaling for nasal catarrh, but it has one great drawback—to get satisfactory results it must be used while the patient is confined to the one temperature which is in bed. To meet the needs of those who may be unable or unwilling to go to bed in the early stages before a cold has definitely commenced, a "dry" inhalation is prescribed. It contains the same percentage of menthol and eucalyptol made up in a volatile base. A few drops sprinkled on a handkerchief provides an inhalation which can be used while the patient is moving about. It lasts for several hours without renewal, is much more convenient to use than the hot water inhalation and occasionally seems to produce even better results.

TREATMENT OF NASAL CATARRH

This dry inhalation has however also to be prolonged and as it is wearisome to hold a handkerchief under the nose for prolonged periods the patient is recommended to use a little device patented and on the Australian market known as a Bed Time Inhaler. This fits comfortably under the nose, can be worn about the house and also used with great advantage while the patient sleeps. Two to four drops of the mixture on this nasal mask two to three times a day is all that is required.

The routine treatment outlined above is simply a description of the methods which have been found most useful in the treatment of the common cold in its chronic form. The fundamental characteristic of all colds is discharge in the nose. It is the effective elimination of this discharge that forms the basic principle of this treatment.

This question of colds must now be considered.

It is a common gibe levelled at the Medical Profession that in spite of all the time it has spent on research and the consequent advancement in the treatment of human ailments the one thing for which nothing has been done is the commonest of all ailments the cold in the head. This is not true. What people really mean is that so far no specific drug has been found capable of clearing up a cold in a few hours or days while the patient goes about his ordinary work and amusements. Or that no vaccine has been introduced which will prevent a cold no matter what unnecessary risks he may take. This is certainly true and is equally true of a number of acute infective conditions. It is an axiom of medicine that the proper treatment of these conditions requires prompt and complete confinement to bed in the one temperature till the inflammatory process has subsided. Taking merely as an example acute inflammatory conditions of the lungs the general public has for long recognised this principle and sufferers are quite content to stay in bed till they are better. They do this not o

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because the doctor and popular opinion tell them that it is the proper thing to do but because they have a well founded dread that otherwise they may die. But with colds they have no such fear. They have never been taught to go to bed with them and suspect that their neighbours would laugh at them if they did. And so they carry on with their usual occupations their colds persist and chronic nasal catarrh with its accompanying symptoms of ill health becomes more prevalent day by day.

It cannot be too strongly emphasised that the only sensible treatment for colds is to go to bed and to stay there in the one temperature till they are better. A most effective therapeutic measure towards getting them better is inhalations used in the way already described. The real objection to confinement to bed for a condition which is believed to be harmless is hidden behind the plausible excuse that people cannot afford the time to do so. The one thing however that no one can ever afford is to go through life suffering from any degree of chronic ill health which can be avoided by a little care.

As the attainment of a high degree of immunity to colds is so important to people who have suffered from nasal catarrh reference must be made to what has already been said about this on page 16.

Before passing on to consider the results which have been obtained in asthma by eliminating nasal catarrh it may be necessary to anticipate any objections to the indication for operation.

As already stated the whole procedure does not originate in any kind of theoretical speculation or preconception but is the outcome of clinical observation. It was in a way suggested by patients who were treated for their nasal troubles alone and then followed up. It is a diagnosis based on results.

TREATMENT OF NASAL CATARRH

It is quite realised that the opening of the antra will be for most specialists the part of the treatment with which they will least agree. The diagnosis of mild infections of nasal sinuses is admittedly difficult but at the same time these milder infections may be said to be more detrimental to the patient as they are so often overlooked and may thus become the cause of chronic and so-called incurable symptoms. Following the observation of numerous cases there is no hesitation in saying that any kind of chronic nasal discharge is almost invariably due to sinus infection however mild and this infection is nearly always bilateral.

Though all the early cases were operated on only after the diagnosis was fully established by orthodox methods the absence of proof by lavage and X rays cannot be regarded at this stage as sufficient evidence to exclude antral infection. Numerous cases of nasal catarrh with one or more of its usual symptoms such as headaches stuffed up nose etc. or its other associated conditions such as vaso motor rhinitis chronic bronchitis and functional dyspepsia have been investigated in which these proofs of infection were absent. Yet on careful consideration of the results of lavage and its effect on the symptoms antral infection and the dependence of these symptoms on it has seemed certain. And what is of supreme importance to the patient when the antra have been opened and the treatment above described has been carried out the symptoms have almost invariably disappeared. In our everyday treatment of nasal cases it is our repeated failure to relieve these symptoms which is so disappointing to the patient.

More recently in cases of nasal catarrh in which gross evidence of antral infection has been absent it has been customary to take their symptoms alone as evidence that their antra must be infected. The simple operation and treatment under discussion have been advised and always with satisfactory results. In practically all cases of chronic nasal catarrh the conviction is held that the antra are the

most important source of the discharge and that the first indication for treatment is to open them and to insist on a suitable procedure for the post operative treatment of colds. When this is done it is most unlikely that any further nasal operation of any kind will become necessary in the great majority of cases.

Being fully aware of how controversial this opinion may seem to be to many specialists it is desired to support it by evidence. It is safe to say that at the present time it is generally accepted in medicine that a chronic infection of any passage is always due to a chronic infection of some annexe of that passage or of the area which it drains. The chronicity of the infection in these central organs is mainly caused by stagnation. A striking proof of this fundamental fact is offered by Urology. It is known that a chronic infection of the interior urethra is always caused by infection of the peri urethral glands and a chronic posterior urethritis by infection of the prostate or seminal vesicles. These central infections are often so mild that it is difficult to detect them but urologists are so certain of these pathological facts that they do not always bother to diagnose these central infections but treat the prostate or vesicles automatically in all cases of chronic urethritis.

The treatment of the nasal sinuses in all cases of chronic nasal catarrh is nothing else but an extension of the same general rule to the respiratory tract. But it must be repeated

in support for this method

To what extent satisfactory results of a similar nature could be obtained in adults without the preliminary opening of the antra but simply by an intensive inhalation treatment in bed followed by the prompt and complete clearing up of subsequent colds cannot be said as it has not been tried

TREATMENT OF NASAL CATARRH

In a number of people who were in hospital and having inhalation treatment a few days prior to operation some alleviation of their symptoms was noted in practically every case but there was in the great majority such a marked difference in these same symptoms after the antra had been opened that it has always been felt that the opening of the antra was essential if satisfactory results were to be obtained within a reasonable time. In the case of children however it was felt that when signs of gross sinus infection were absent whatever antral infection was present might be sufficiently recent to clear up with bed and inhalation treatment alone. In practice this was found to be so and the results of this procedure are presented in Chapter VII.

Case histories 16, 17 and 18 give a general idea of the daily misery suffered by innumerable people in all countries as the result of chronic nasal catarrh. They go from treatment to treatment and find little relief. They are given powders for their headaches, mixtures for their cough, diets for their gastric disturbances and holidays for their general health which deteriorates year by year. It is only by the removal of the cause of their troubles that they can ever get back to health. These case histories are given merely as examples of many hundreds of people with similar histories who have been treated with similar results. They represent the average case of chronic nasal catarrh. There are innumerable others who suffer in the same way although some so far do so to a lesser degree and others who have passed through this stage are now ever so much worse.

That such results obtained at the author's hands do not in themselves establish the complete solution of the problem of chronic nasal infection is fully recognised. These results however have been obtained in all who undertook the treatment and who could then be taught the necessity of stopping each cold promptly and completely and who acquired the habit of doing so. The mere possibility that

people such as these who represent such a large section of the general public could be relieved of their chronic ailments by this or by any other treatment is a matter of considerable importance to Public Health. The facts so far observed call for further investigation.

The symptoms of ill health from which these people suffered are identical with those accompanying asthma. They were due to the same cause and were relieved in the same way. To what extent this relief of symptoms was obtained and the frequency and severity of the asthma attacks reduced by this treatment will now be considered.

CHAPTER THREE

ASTHMA AND ITS ACCOMPANYING SYMPTOMS

In considering asthma it must be clearly understood that the author's attention was first drawn to it by patients who had already been treated for chronic nasal infection. In asking these people after they had left hospital how they were dealing with their colds and to what extent the symptoms of which they had previously complained had been relieved they frequently mentioned other symptoms of which they had not spoken previously such as repeated attacks of sneezing which had disappeared and attacks of asthma which had become less frequent and less severe. And thus after a while it became the custom to suggest this treatment to those seeking relief for paroxysmal sneezing or for asthma whenever other marked symptoms of nasal trouble were also present.

Here again the results obtained were so satisfactory that it soon became the habit to suggest the same treatment for all cases of excessive sneezing and asthma whether other nasal symptoms were a prominent feature or not. The only condition laid down was that no treatment would be given at all unless the patient was prepared to give reasonable assurance that he intended to deal with any subsequent colds in the manner prescribed.

No consideration was given to the question of any possible complication arising from allergic reactions in any of these cases. But as those treated always seemed to show a very marked improvement and no one appeared to be in

BRONCHIAL ASTHMA

any way the worse for having had their antra opened in this way the adoption of this routine treatment seemed to be fully justified

It was in 1935 that the consideration of allergic reactions first became a matter of serious interest in connection with this treatment. From discussions at that time with several Allergists it was gathered that treatment by specific desensitization could be applied successfully to a percentage of people suffering from asthma and that in the others the most important underlying factor was still regarded as nasal catarrh. The main difficulty expressed was how to get this nasal trouble sufficiently cleared up to give the patients definite relief.

As for several years prior to that what had been regarded as highly satisfactory results had been obtained in most cases by this nasal treatment alone it was decided to open a Clinic for the treatment of asthma in which catarrhal cases would be treated according to the method already described.

Facilities for such a Clinic were very kindly offered at a general hospital Sydney and it was opened for the treatment of asthma in 1937. The first intention was to treat only those cases which were definitely catarrhal and to leave allergic cases to those more qualified to deal with them. Owing however to the difficulties in arranging for this it was decided to proceed with catarrhal treatment only. This meant that all those seeking treatment must be treated in this way alone. If any evidence were to be obtained as to the efficacy of the treatment there could be no picking and choosing of cases. Doubts felt about the advisability of doing this were somewhat allayed as all cases of asthma seeking treatment in the past had already been treated in this way and no untoward results had been noted.

To arrive at a proper evaluation of the results obtained it is necessary at this stage to consider in some detail the

signs and symptoms of those seeking treatment as it was from these symptoms of ill health that they were seeking relief. There are certain signs and symptoms of ill health which occur in practically all cases of asthma and they are present in varying degrees of intensity. Although at times one or other of these symptoms may be absent they occur with such regularity that each must be regarded as an almost constant factor in the condition. Together they make up the general picture of the ill health and misery from which the patient suffers and for which he seeks relief. The efficacy of any treatment for asthma must be judged on its ability to remove these symptoms and to give reasonable immunity against their return.

The first of these symptoms is of course the asthma attack. The most important of the others are a pasty skin and heavy looking eyes, paroxysmal sneezing, headaches, nasal obstruction, troublesome cough, repeated attacks of nausea, functional dyspepsia and faddiness about food, shortness of breath on exertion, tiredness and nervousness.

In many patients all these symptoms are present in the large majority most of them are present and in all cases the patient complains of some of them. They are the same symptoms which as has already been stated on page 1 occur in varying degrees in all cases of chronic nasal catarrh. It is because as will be shown that they can be eliminated by clearing up nasal catarrh that the effective treatment of that condition is regarded as essential to the successful treatment of asthma.

As a matter of comparison the following table sets out the symptoms specially complained of at the first consultation by ten patients suffering from chronic nasal catarrh treated twelve months ago by the method described in Chapter II and by thirty three patients suffering from asthma who were first treated at about the same time.

BRONCHIAL ASTHMA

	NASAL CASES		ASTHMA	
	per cent		per cent	
Headache	8	80	14	42
Nasal Obstruction	9	90	28	84
Excessive Sneezing	4	40	23	69
Troublesome Cough	6	60	8	24
Skin Changes	5	50	25	75
Tiredness	9	90	31	93
Nerviness	5	50	24	72
Gastric Disturbances	7	70	31	93
Shortness of breath on exertion	5	50	31	93

As a result of the treatment these people underwent these symptoms have been cleared up in nearly every case during this last twelve months. Where this has not been so it has been so closely associated with failure to carry out the treatment properly or with carelessness in stopping a subsequent cold once the symptoms had been cleared up that there could be no reasonable doubt that it was due to the catarrh which had thus been allowed to persist.

Symptoms were much the same in all cases of chronic catarrh whether the patient suffered from asthma or not. They have already been discussed on page 6 *et seq* but certain variations noted in asthma must be mentioned.

Gastric disturbances were even more common among those suffering from asthma than among those complaining of chronic nasal trouble alone although the feeling of nausea was still the most frequent symptom mentioned. Frequently there was also a history of vomiting especially during the asthmatic attacks. Loss of appetite was common and so was a considerable amount of fiddiness about food especially among children. It seemed that this fiddiness was due to the intake of certain mere distaste for the food and that certain articles of food (e.g. milk, bananas, eggs, etc.) almost invariably

ACCOMPANYING SYMPTOMS

precipitated an attack of asthma. Others although not complaining of any article of food in particular stated that heavy meals especially when taken at night almost always produced attacks.

Here again the stomach disorders seemed to be entirely due to the presence of nasal discharge in the stomach. Among the first results noted shortly after beginning the treatment were an improved appetite much less fuddiness about food and the diminution or absence of vomiting during the attacks. At a later stage practically all of those who had cleared up most of their catarrh (and these were the majority of the cases treated) had healthy appetites. They were also free of their feelings of nausea and of most of their fuddiness and were most emphatic in their statements that the articles of food which had previously produced attacks no longer caused them any trouble. Loss of weight which in some cases had been noticed during the previous few months and in others had been steadily progressive for two or three years was by no means uncommon before treatment began. Almost without exception weight was restored to normal and in nearly every case it was increased once the catarrh had been removed. Sickness in trains and trams was noted in a number of people suffering from asthma. It disappeared as was to be expected when the nasal discharge ceased.

Tiredness was a symptom that was more easy to estimate in the case of children as normally they do not get too tired to play without good reason. This disinclination for play was noted in most asthmatic children and was a very marked feature in some. After treatment it almost invariably disappeared and reports from the mothers repeatedly indicated that the child had become full of energy.

Shortness of breath on exertion is another common symptom. In the above table it was present in nearly all of those who suffered from asthma and in about half the

number of those who did not. That it was not the result of the asthma attacks is shown by the fact that prior to treatment it had persisted even in prolonged intervals between attacks. It cleared up to about the same degree in each group after treatment but recovery from this symptom and from tiredness seemed always rather more delayed than recovery from the other secondary symptoms when colds were brought under control. Shortness of breath on exertion in children will be referred to in a later section see page 122

Chronic bronchitis is frequently associated with asthma and in a number of patients it preceded the first attack of asthma by several years. That this precedence of bronchitis was more commonly noted in children might easily be due to the fact that the early history of the child was more recent in the mother's mind whereas adults sometimes forget the repeated bronchial attacks of their own childhood.

After treatment attacks of bronchitis continued for a little while as the result of subsequent colds, sometimes they occurred in association with asthma and sometimes without. Generally the wheezing which recurred with colds and then persisted for several days was mainly bronchial although a certain amount of undoubted asthmatic wheezing was sometimes noted within the first twenty four to forty eight hours of any cold.

No claim is made that all bronchitis is secondary to post nasal discharge but certain facts are of interest. In those who have had only an occasional attack of bronchitis during their lifetime it is safe to say that that attack almost invariably followed a cold in the head. In those who have had attacks rather more frequently the history is practically always the same. In those who have suffered from winter bronchitis year after year it is usual to hear their condition ascribed to a cold which began at the beginning of the winter and which then continued throughout the winter.

months. In cases of persistent chronic bronchitis the nasal history may be somewhat more obscure but nasal investigation will show in the great majority of cases (and even in those who deny the recurrence of colds) the presence of a well marked nasal and post nasal discharge.

If in the occasional cases mentioned above there had been no preliminary cold in the head it would be equally safe to say that there would have been no bronchitis. In the case of winter bronchitis if a cold had not first developed and had not then persisted throughout the winter probably there would have been no persistent chest involvement at all. And in all cases of chronic bronchitis it is perfectly safe to say that the first indication for treatment is to clear up chronic nasal catarrh and when this is done completely very little further treatment will be required.

Bronchiectasis was present in a number of those treated sometimes in conjunction with asthma and sometimes not. Case histories No. 14 and the one given on page 132 are examples of two of these. Whatever the ultimate result in regard to the lesions in the lungs the clinical results were excellent. Both patients were not only enabled as a result of treatment to mix happily with other people but were able to do so on perfectly equal terms and were quite indistinguishable from those who had no such lung lesions at all. They have now beyond any reasonable doubt every chance of being able to continue to do so indefinitely as long as they continue to stop both promptly and completely what has now become a very occasional cold.

It is generally acknowledged that the majority of people suffering from bronchiectasis show gross evidence of chronic nasal sinus infection requiring surgical intervention as one of the first indications for treatment. It is equally certain that most at least of those who do not show this gross evidence have well marked chronic sinusitis as shown by their persistent nasal and post nasal discharge.

although not always by the usually accepted methods of diagnosis. In the adult whose case history is given definite evidence of sinus infection in accordance with these accepted methods was present as the intra had already been opened but his colds and discharge had still persisted and his condition had gradually grown worse. It was not until the discharge was cleared up by proper attention to colds that his health was regained. Similar results to those obtained by this patient have been noted in all who have sought and undergone this treatment and there is no hesitation in saying that the first indication for treatment in all cases of bronchiectasis is to clear up chronic nasal catarrh. When this is done effectively it will be found that a large percentage of those now undergoing prolonged treatment with little relief will be restored to health and beyond the prompt and complete clearing up of an occasional cold no need for further treatment will be felt.

There is little more to be said about headaches, nasal obstruction and a troublesome cough in people suffering from asthma beyond what has been already said of the same symptoms in those who suffer from chronic catarrh. They are present to much the same degree, are due to the same cause and disappear in the same way as the nasal infection clears up. Much the same can also be said about the pasty skin and heavy looking eyes which are so characteristic of the majority of people with well marked nasal catarrh. This appearance comes and goes with the underlying infection and can be an excellent index to the discerning eye of how far colds have been cleared.

There is no pretence in this book of being able to speak with any authority on the subject of allergy. The systematic treatment of asthma which is described in Chapter IV was carried out in a Clinic in which the object when it was first opened was to deal only with those cases in which the attacks were non-allergic in origin and which could thus be regarded as being mainly secondary to nasal infection.

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The fact that a large number of those seeking treatment would most probably be highly allergic was by no means overlooked but as special treatment for these people could not as has already been stated be arranged it was decided to proceed with the treatment of catarrh for all cases without making any attempt to carry out allergic investigations at all. A large proportion of those who were ultimately treated had already had skin tests and courses of injections of specific allergens in the Allergy Departments of Public Hospitals. It could thus be assumed that their symptoms had already been regarded by those who were in a position

had already been regarded as their allergic reactions.

A considerable amount of trepidation was felt in applying this treatment to severe cases of asthma of undoubted allergic origin especially in view of all that has been said about the inadvisability of nasal operation in such cases — and especially so in this treatment where an operation on the intra might not always be considered necessary. This trepidation however was as has already been said somewhat allayed by the results obtained in the first case treated whose history is given on page 108. It was still more allayed by a rapid succession of other cases also undoubtedly allergic in which the results were similar and equally satisfactory.

When interviewing patients who had previously given positive skin reactions and had already received courses of injections of specific allergens no inquiries were made at the Clinic as to the particular irritant against which attempts had been made to desensitize them. In taking histories notes were made only of those factors which the patients themselves knew to be most likely to cause their attacks. Among the air borne irritants house-dust and certain flowers such

as poppies were noted as those most frequently mentioned. Others were also mentioned from time to time and so also were certain articles of food such as bananas, condiments, ice cream etc. Some of the patients were already on special diets to eliminate the articles of food which were known to upset them, while others had been warned to avoid dust and certain flowers and quite a number were sleeping on special beds.

The various causes of attacks were noted, not from any idea of advising the patients to avoid them in the future, but because it was felt that if, as a result of this treatment, the patient could not be brought to the stage where they no longer affected him, there could be no object in proceeding with further treatment at all.

During the first year or two a number of patients reported that as they had got rid of their colds and catarrh their susceptibility to these irritants decreased. In some it disappeared altogether and to this effect became more frequent as time went on. It could not be doubted that a number of these people markedly allergic would only be deduced that, irritating nasal, removed, the excitement of the respiratory system lessened to such a degree that the offending irritants which had troubled them previously ceased to irritate and

As for certain disturbances already been in the treatment of nasal who were about their food and other disturbances while the patients other draining into their stomach cor no gastric symptoms once they also happened in asthma patients were found to be no longer their nausea disappeared and if previously upset them no longer, of course, did not happen in those

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the treatment sufficiently well to clear up their nasal discharge to the necessary degree. But it happened in the majority of cases and in sufficient number to make it obvious that all could have obtained similar results if more co-operation had been given.

Once this fact was sufficiently evident it became the rule to urge all patients after the first few weeks of treatment to give up their special beds to fill their homes with flowers, to eat what they liked and in short to make no further effort to avoid the exciting causes of their particular brand of asthma. Since then the great majority have done so and it has not been found that it interfered with the treatment in any way.

To those who had cleared their catarrh completely it made no difference as they were having no attacks. In those who had carried out the treatment reasonably well but not completely it served as an index of how far their catarrh had been cleared up as until these irritants no longer caused attacks it was assumed that the patients were still allowing some catarrh to persist and they were immediately reminded of the necessity of carrying out the treatment exactly.

Furthermore once a patient had become free of asthma for several months in spite of continual association with these irritants and it was then found that they were again beginning to cause slight attacks it was taken to indicate that a certain amount of catarrh had been allowed to become re-established. Accordingly the patient was again confined to bed on inhalation treatment and kept there until all signs and indications of his catarrh had once more disappeared. In practically every case where this was done he once more became free of all signs of asthma and had once again every chance of remaining so indefinitely as long as he was prepared to stop each future cold promptly and completely.

The association of asthma and most other illnesses with psychological disturbances is a matter of everyday ex-

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s being better while these emotional disturbances were still able to do so

What happens to these characteristic symptoms as the result of treatment is best illustrated by the history of a case in which treatment is still in the early stages. The following history is given as the symptoms are typical of those from which asthma people usually suffer and the results are those that can be obtained almost without exception by any patient who will carry out the treatment to the best of his ability as this one did

C. R. aged 26 years was first seen six months ago and had then been suffering from asthma for four years. His attacks had been steadily getting more frequent and more severe. During the previous three years they had occurred four or five nights a week and during the last twelve months he had had them every night and also frequently during the day time. There was a marked history of asthma on both sides of his family. He usually had four or five colds a year his nose was always blocked and he used at least four or five handkerchiefs a day. The discharge was dirty and frequently offensive although he had very little sense of smell. He had a troublesome and disturbing cough throughout each night and never slept on less than three pillows. He had a pasty skin heavy looking eyes and had lost two stone in weight in the previous two years. His appetite was fair but he was very faddy about food and several things produced attacks especially onions. Dust always caused attacks and so did changes in the weather. Worry invariably caused or aggravated them. He was extremely short of breath on exertion even when riding his bicycle along a level road. He complained of always feeling tired and was according to his own admission extremely irritable and was growing steadily more so. For several months he had been too ill to work. He had had skin tests and courses of injections and had also tried various other forms of treatment.

perience. In the physiological mechanism of the asthma attack the vago sympathetic "balance" is involved and is influenced by emotional states. Excitement, whether pleasurable or otherwise, is known to bring on attacks and once started by dust, pollen etc., these attacks are frequently aggravated or prolonged by emotional upsets. Anything which increases "sympathetic tone" such as increased confidence, heightened emotion and good spirits will often inhibit or benefit attacks. As an example of this, the good results sometimes obtained in patients who suffer from true asthma by the hypodermic injection of normal saline which they think to be adrenaline, are only too well known.

The question of whether asthma attacks are ever produced by purely psychological stimuli, or are merely aggravated by psychological unrest is a matter still to be decided and one which cannot be entered into here.

'Nerviness' was commonly observed in patients applying for treatment and spoken of both by them and their friends. It was much the same condition as that already mentioned as occurring in patients suffering from the effects of chronic nasal catarrh, and it cleared up in exactly the same way once the catarrh had been removed. Emotional upsets were frequently mentioned as being one of the chief factors giving rise to their attacks. This was noted particularly in children and is referred to later.

Acting on the observation of results, it was not felt that any special treatment was required to counteract this factor or that any greater significance could be attached to it than to the dust, pollen, etc., which also caused attacks. The prognosis was never regarded as being in any way the worse on this account and results showed that there was no reason why it should be. In all those who cleared up their catarrh emotional upsets no longer precipitated attacks and in estimating results of treatment no one was ever regarded

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as being better while these emotional disturbances were still able to do so

What happens to these characteristic symptoms as the result of treatment is best illustrated by the history of a case in which treatment is still in the early stages. The following history is given as the symptoms are typical of those from which asthma people usually suffer and the results are those that can be obtained almost without exception by any patient who will carry out the treatment to the best of his ability as this one did

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His treatment began six months ago. On leaving hospital he returned home to live with both his own family and his parents in a somewhat dilapidated weatherboard cottage. Most of the family suffered from chronic colds and it was difficult to find a place free of draughts in which to place his bed. Soon after arriving home he developed asthma. The attacks grew steadily worse and on account of their increasing severity and the conditions under which he was living it was decided to return him to hospital. Two days after re-admission his attacks subsided and a few days later he returned home. During the next few weeks he had two colds accompanied by slight attacks of asthma and both of them were cleared up completely by treatment in bed. Since then he has been very well. He has treated an occasional slight cold promptly in the manner prescribed and has had no further sign of chest trouble.

When seen recently at the end of six months treatment he was looking extremely well and was very enthusiastic in maintaining that he felt it. He had had no asthma for three months, no cough at night and was sleeping comfortably on one pillow. His appetite was in his wife's words enormous. He had gained twelve pounds in weight and said that his shortness of breath on exertion was gone. He was breathing quite clearly through his nose, his sense of smell had returned, he was much less irritable and dust, worry and onions no longer affected him. He had by then returned to work feeling as he said, an entirely new man.

CHAPTER FOUR

TREATMENT OF ASTHMA

As has already been stated in the preceding chapter all asthma patients during the last ten years have been treated for chronic nasal catarrh alone. In interviewing prospective patients it was explained that their asthmatic attacks were being regarded as symptoms arising from the chronic discharge from their noses just as their other symptoms of ill health such as nasal obstruction chronic cough gastric troubles, tiredness shortness of breath on exertion or whatever they might be were regarded as being due to the same condition.

It was further explained that this catarrh was looked upon as being the result of colds which had never been properly cleared up and that in association with this chronic catarrh there must necessarily be a certain amount of chronic nasal sinus trouble and that of these sinuses the antra were the most important. Each patient was told that if he wished to undergo the treatment his antra would need to be opened but that although this simple operative procedure was considered necessary in order to obtain satisfactory results within a reasonable time it would not in itself produce any lasting results that such results could only be obtained if he were prepared to stop each cold that occurred after he had left hospital promptly and completely that to do this it would be necessary for him to go to bed and to use the inhalations that would be prescribed and to remain there until all signs of each cold had disappeared and that this was the after treatment and the only after treatment he would be asked to observe but, unless he was prepared to do it no treatment would be given at all.

These interviews always took place with the patient and one or more members of his family. In reply to enquiries as to what results could be expected from the treatment, they were informed that no suggestion was being made of a 'cure' for asthma, as each asthmatic patient had a constitutional tendency to it which could not be removed but that the object of the treatment was to remove the chronic nasal discharge which was regarded as an important factor in the causation of asthma and which could be removed by a proper attention to colds. Each was told that although he would be given an opportunity to improve his health no promises could be made as to results as it was never known to what extent any person would be prepared to co operate in carrying out the treatment, each patient however, would be given any necessary help from the Clinic to enable him to do so.

He was then sent home to consider what had been said to talk it over with his family and to return later if he had decided that he wanted the treatment and his family was prepared to assist him in dealing with subsequent colds in the manner required.

It was found necessary to go into the question of colds in some detail. After explaining the idea held about the cause of catarrh it was pointed out that while colds take somewhat different forms in different people, the one characteristic common to all colds was discharge in the nose. The patient was told that, although this discharge was quite apparent when profuse, it was possible to have a slight cold in which the increase in the amount of discharge would not be so apparent, but it would still be capable of aggravating the symptoms which arose from it, i.e. the symptoms for which he was seeking relief. Thus, while undergoing treatment any aggravation of his symptoms must be regarded by him as indicating the presence of more discharge, or of a more irritating discharge, in his nose and so as constituting what, for the purpose of his treatment, was

being called a "cold" and required prompt treatment in the form of inhalations while confined to bed

In opening the Clinic, the first intention was to treat each patient in accordance with the method which already has been described for catarrh, i.e. two weeks in hospital with strict confinement to bed and inhalation treatment after his antra had been opened, followed by instruction in how to wash them out and emphasis on the necessity of going to bed with each future cold and of staying there on treatment till it was completely gone. A variation of this treatment when applied to asthma however immediately became necessary. Antral lavage, after the patient had left hospital, had to be omitted. In order to teach a patient how to introduce the catheter correctly it is necessary to see him four or five times a week for two or three weeks. But with these patients who were still subject to colds and the attacks arising from them, daily visits to the Clinic were out of the question, as it interfered with the basic principle of the treatment.

A difference noticed when the treatment was applied to cases complicated by asthma was the greater difficulty experienced in getting catarrh cleared up so completely that asthma attacks would no longer occur. It is probable that there would be the same difficulty in getting the catarrh of ordinary nasal cases cleared up to the same degree. In these latter cases, however, clearing up the greater part of the catarrh has generally been found to be quite sufficient to get rid of the symptoms complained of, such as head aches, nasal obstruction, sneezing, gastric troubles, tiredness, etc., if not completely, then to a degree, at least, which gave the patient complete satisfaction and that was generally as far as he was inclined to go.

This satisfaction might of course have been still more complete if the patient could have been persuaded to stop his colds still more thoroughly and so get rid of his catarrh altogether. But getting patients to go to bed promptly with

their colds and to stay there till they are quite gone has always been difficult, and strict attention to after treatment has mostly been unobtainable in the ordinary cases of chronic nasal catarrh. But in asthma, although the same difficulties were encountered, the distress of the attacks and the desire to get rid of them have made the patient more inclined to co operate.

The patient's co operation was all important. It was in fact, the only matter of real consequence as the treatment, after the first few weeks, was entirely in his own hands. Unless it was going to be carried out more or less exactly, catarrh could not be cleared up and beneficial results could not be obtained. In addition, if this were not done, no reliable estimate of the efficacy of the treatment could be made. The opening of a Clinic for the treatment of asthma by means of a treatment for chronic nasal infection alone and under the supervision of an Ear, Nose and Throat surgeon would not be worth while unless it could be shown that asthma could be got better and kept better by that treatment when properly carried out. This was specially so as sufferers from asthma can be benefited to some extent by medical treatment alone, and this was not being given by the Clinic and could in any case, be better obtained elsewhere. From the point of view of a surgeon who had specialised in Ear, Nose and Throat work for many years there was no incentive to turn to the treatment of asthma especially a somewhat tedious treatment unless it could be shown that the results were more beneficial to the patient than those which could be obtained by other available methods.

If, at the end of the first year or two, the conviction that such results were being obtained could not be held, it was fully intended that the Clinic should be closed.

Apparent readiness and ability to co operate in the treatment was therefore the only qualification necessary to

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receive it. All who were able to give reasonable assurance of this were treated, no matter how long the duration of their asthma, nor how severe their attacks, nor how obvious was the association of these attacks with allergic disturbances or emotional instability. And with these assurances given, treatment was undertaken without further question, even in those in whom it seemed only too apparent that the promises made were not likely to be kept.

The first step towards getting co-operation was to explain to each patient that it was the colds in his head which he had so consistently neglected which were regarded as being to a large extent responsible for his ill health. He was told that whatever different effects a cold might have on different people, there was one characteristic common to all head colds and that was the presence of discharge, or where discharge was already present, an increased amount of it in the nose. It was explained that the profuse, watery, highly irritating discharge which accompanies the acute stages of a cold clears to some extent after a few days and is replaced by a thick, mucoid or mucopurulent discharge from the nose and down the back of the throat and the patient usually then feels a little better. In spite of this feeling of being better, however, the cold at this stage is by no means gone and the discharge continues for a few weeks or perhaps for months. In many people before it disappears, another cold has supervened and more nasal and post-nasal discharge is secreted and it is in this way that the condition commonly known as nasal catarrh becomes established.

Further, it was this discharge which was being regarded as the main factor in the causation of his asthma attacks as well as his other symptoms of ill health. This treatment was being suggested by the Clinic as a means of getting rid of this discharge by intensive treatment over a few weeks and of then preventing its recurrence by stopping each cold promptly and effectively by inhalation treatment in bed.

The majority of those attending the Clinic suffered on their own admission from frequent colds some got one about every month or two and most of them rarely without one. Of those who did not acknowledge frequency of colds some said that although they had them repeatedly in the past they had not done so during previous few years. The remainder denied and somewhat indignantly that they had ever been subject to colds at all a statement that can rarely be taken seriously as practically everyone has a cold at least occasionally. Even when no colds were acknowledged many admitted the need of two or three or perhaps up to five or six even more handkerchiefs a day to clear away a nasal charge which was sometimes watery and sometimes thick and discoloured. The general experience in asthma is that the great majority admit to the use of two or three and sometimes up to ten or twelve handkerchiefs a day clearing their noses. Sometimes large pieces of old linen are used for this purpose as they are more easily disposed of. Absorbent tissues are of course most suitable for this purpose and are widely used. As the natural drainage from the sinuses is post nasal and as ever so much more of a charge escapes that way than is blown from the nose the number of handkerchiefs used daily gives some idea of the tremendous amount of secretion that takes place in a twenty four hours in many who suffer from chronic nasal catarrh. Whether the histories indicated frequent or occasional colds the treatment in all cases was still the same and the subsequent histories of the patients showed colds to be the most important cause of their troubles.

They were told repeatedly (and they could not be told too often) that the proper control of colds constituted the main treatment of the Clinic. In view of this it would seem to be a simple matter to get those who had appeared to understand it and had then undertaken the treatment to treat their colds as directed but in actual practice it was ex-

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tremely difficult. To go to bed with a cold was something that they had never been taught to do something that their parents before them and the people around them rarely did. Some of those undergoing treatment made reasonable attempts to do it and some made little or none. But even with those who were most willing to co-operate it was not at all uncommon even after weeks of treatment and the continual reiteration of the principle involved to have them say that only then were they beginning to understand what they were required to do. It is doubtful whether any of them ever carried it out exactly but the results obtained by even the incomplete co-operation given by the majority seem to be sufficiently beneficial to warrant the universal teaching that the first thing for all asthmatics to learn is to make very certain of clearing up their colds promptly and completely. There is no doubt that when this is done a great deal of the unnecessary suffering of asthma will be overcome.

Even in those who were willing to co-operate to the best of their understanding and were prepared to deal as effectively as they thought necessary with their big colds the question of the small cold was always a difficulty. The reported colds acknowledged by the majority of asthmatics were simply exacerbations of a chronic condition which itself was the result of colds they had neglected in the past. Thus it was only reasonable to expect that after each of these exacerbations no matter how slight it might be the chronic condition would become appreciably worse. In all chronic illnesses the exacerbations which occur from time to time vary in intensity. In cases of chronic nasal catarrh the more acute forms were apparent to the patients and to their relatives and recognised as colds but in the milder forms, i.e. the small colds the presence of a cold was not always realised. In small colds the mucous membrane of the nasal passages and the infected sinuses becomes inflamed in the same way but to a lesser degree than it does in the

large and the nasal discharge increases both in amount and in its ability to irritate. The symptoms secondary to nasal discharge thus become aggravated, the nose becomes a little more stuffed up, the gastric troubles and tired feelings etc are a little more pronounced and the asthma attacks themselves reappear or become more frequent and more severe.

To the onlooker this aggravation of symptoms may seem to take place without any apparent increase in nose trouble at all. To a patient who is both willing and anxious to co-operate it is immediately associated with increased nasal discharge which he is ready to admit to be a small cold and to treat accordingly. But with most patients this necessary co-operation was always difficult to obtain. Even when they admitted that they had a more stuffed up nose and a feeling of increased nasal discharge many were eager to maintain that no cold existed.

It was thus the small cold that produced the biggest problem. When patients neglected a big cold it was apparent that they were only playing with the treatment and they were immediately informed that if they were to continue with the Clinic they would be expected to do it properly. In practically all of these cases considerable benefit had already been obtained and they decided to carry on. With the small cold however they were able to advance arguments that were difficult to refute. The most common was that although they were quite willing to admit when asked about it that there had been more discharge they had not noticed it for themselves. And that they might not notice an increased amount of discharge is always possible. It is surprising the number of people who will deny all knowledge of a profuse post nasal discharge that is most apparent on examination. This can only be explained by the fact that they have had it for so long that they have become completely unaware of it.

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Another difficulty is that in chronic nasal catarrh the slight exacerbations under discussion might not produce an increase in the amount of the discharge already present but simply make it more irritating. Whether the effect of the small cold was to increase the amount of discharge or only to make it more irritating the result was always the same i.e., an aggravation of the secondary symptoms calling for immediate treatment. And so it was laid down as a fundamental rule, that any increase in the frequency or severity of the symptoms from which the patient had suffered before treatment must be looked upon as the result of a fresh cold and he must go to bed immediately and stay there on treatment till the symptoms had completely disappeared.

The length of time it takes to get rid of a cold by inhalation treatment in bed depends on several factors the chief of which is how thoroughly confinement to bed is observed. The object of bed treatment is not for rest but to keep the patient as far as possible in the one temperature. Thus confinement to bed for twenty three hours a day is of very little value in clearing up a cold if the patient wanders about for the other sixty minutes or some shorter period and so allows the cold to freshen as will happen so quickly in those subject to repeated colds. Another factor likely to prolong considerably the time spent in bed is visitors with colds the majority of whom take no trouble to keep the highly infectious droplets propelled by coughing or sneezing away from the patient. A most important factor however in deciding how long it takes to clear a cold is the stage at which bed treatment is begun. If begun at the first indication of a cold and carried out exactly a few days should be sufficient to clear it completely. But if the patient waits twelve to twenty four hours before beginning treatment in order as he says to make quite sure that it is a cold it frequently takes anything from ten to fourteen days. It is quite possible of course for a cold to begin quite suddenly and to become well established within a

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support to carry the treatment out a system of reports was adopted. It was arranged for these reports to be given by the relative or friend who had undertaken to look after the patient but not by the patient himself. They were to be given by telephone to the Sister in Charge of the Clinic, twice a week during the early stages of the treatment once a week when the patient was getting better and once a month when he had reached the stage where he was reasonably well. The chief importance of these reports was to check up on the presence or absence of colds and when present to see that they were being properly treated and above all to make sure that once a patient did go to bed with a cold he did not get up again till it was completely cleared.

In this way some control was kept over the treatment and, as full notes were made of each report a clear picture could be gained at any time of how far the treatment had been carried out of the results so far obtained and the connection between colds and asthma attacks. It is because of this system of recording reports as well as an occasional interview with the patients themselves, that full justification is felt for the opinion that practically all able attempts to carry out the treatment have resulted in markedly improved in health and freedom from asthmatic attacks for prolonged periods. Those who got rid of their asthmatic attacks and then had another attack, this was usually due to a cold or a series of colds which in the manner prescribed

A fundamental part of the treatment stressed was that once a patient was free of or with any symptoms of asthma, he was not on any special diet or to do any special exercises. He was to continue his normal life until it was necessary to return to the patient.

conclusively that his asthma attacks will not return with his first cold but will do so only when a previous cold or a series of colds have been neglected and catarrh has been allowed to run on. Having arrived at this stage of freedom from asthma his future health is then in his own hands and if he finds it necessary to go to bed for a few days once or twice a year in order to clear up an occasional cold it is a very small price to pay to keep free of asthma and of the symptoms of ill health which accompany it.

The continued observation of these cases has demonstrated conclusively that anyone who suffers from repeated colds no matter how frequent or how severe they may be can within a few months and by means of the preliminary hospital treatment and subsequent bed treatment of colds in the manner described reach the stage where he gets a cold only once or twice a year and often less than that. It must be clearly understood in cases in whom there is no asthma it is not necessary to spend so much time in bed but merely the time already indicated as being necessary for the relief of nasal catarrh alone. This usually means a few days in bed two or three times in the early months of treatment and after that the clearing up of a subsequent but occasional cold. This freedom from colds also means freedom from nasal catarrh which can only be regarded as complete when there is also a complete absence of secondary symptoms. No other method of treatment is known to the author which will clear up colds and all the secondary symptoms in the same manner and in arriving at these results no help of any kind has been obtained from the use of the various drugs and vaccines that have been tried from time to time.

As the patient's co-operation in the proper treatment of colds was essential (although this has been mentioned several times it is felt that as it was the only principle of treatment involved, it cannot be emphasised too often) the

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preliminary interviews with patients became a matter of extreme importance. It thus became a fixed rule that each prospective patient coming to the Clinic must bring some responsible person with him—in the case of children one or both, parents and in the case of adults some person living in the same house who would be prepared to give the necessary assistance to enable the treatment to be carried out correctly and to give the required reports.

At these interviews the patient's history was taken. Notes were made of the date of onset of the condition and the frequency and severity of the attacks, the nasal and general symptoms from which the patient suffered, anything he knew that caused attacks and any treatment that had been received. This detailed list of symptoms was made for reference later as clearing them up was the main object of treatment and its efficacy could only be judged on how far it was able to do so. A note was also made of any family history of asthma. A large proportion of those who were treated could name some member of their family who suffered from it and some could name several. After the continued observation of these patients however it can be felt that nothing was ever seen that indicated that those with a family history of asthma however marked were any more resistant to treatment than those whose families were clear.

The physical examination consisted of visual examination of the nose and naso-pharynx. Notes were made of any deflection of the septum, the presence of any polyp, the condition of the turbinates, the amount of discharge in the nose and naso-pharynx and any special abnormality which might be seen. No special investigation either by lavage or X-rays, was made of the intra-nasal as the object of the Clinic was to carry out this treatment for catarrh, the presence of which was taken to be indicated by the asthma attacks and other symptoms regarded as being secondary to it.

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It was emphasised that as this was the only rule of treatment, failure to carry it out would be complete failure to carry out the treatment at all

It was felt to be important that no one should have any false ideas about promises of improvement from either the operation or the treatment and so each patient was told to read this paper carefully and to sign it to say that he had done so and understood exactly what it meant. Each one undertaking treatment was told that the strict observance of that rule was all that would be expected of him. Those who were known to be allergic to certain irritants were told that they would not be expected to take any precautions to avoid them, but were encouraged, when well enough to be up and about, to sweep their own floors, to fill their homes with flowers, to give up their special beds and to eat what they liked, etc. Nothing was given for the relief of asthma attacks and no medical treatment of any kind was suggested. Each one was told that if at any time he was sufficiently ill to need medical attention, he was to ask his usual medical attendant to see him and to carry out his instructions, but he was not to get out of bed until permission to do so had been given from the Clinic.

No promise of beneficial results was made in order to influence anyone to undertake the treatment. Each patient was simply assured that he need expect no discomfort from the operation and that every assistance would be given to enable him to carry out treatment, but only along the lines indicated. No decision on the patient's part was accepted at the first interview, but when all had been fully explained to him and his friends they were sent home to consider it and to decide whether treatment was desired and if it was to return in a week's time when arrangements would be made for his admission to hospital.

The patient's age, the duration of the trouble and the frequency and severity of the attacks made no difference in deciding to accept any one for treatment when it was

that he was both willing and able to carry it out. The youngest treated was three and a half years of age and the oldest seventy four. Preference was always given when possible to those who had suffered from asthma for many years whose attacks were getting more frequent and more severe and who had already undergone courses of injections of specific allergens or had tried other recognised treatments without relief. It was felt that the results obtained in these cases would give a better indication of the value of the treatment.

In practice no more difficulty was found in getting people with severe and long standing asthma better than those who had had only one attack or an attack only occasionally with long free periods in between. In all cases the same degree of difficulty was experienced in getting people to give sufficient co-operation to reach the stage where they were free of catarrh and their colds only recurred at longish intervals. Everything depended on this and all who could be prevailed upon to give this co-operation received relief from their attacks and their other symptoms of ill health and to much the same degree.

The main objections to the treatment as expressed by prospective patients were —

(1) The antrum operation not because of any doubt expressed as to the correctness of the diagnosis but because almost all of those who objected were able to quote some friend or relative who had suffered from antrum trouble for years and in spite of one or more operations was still unrelieved.

To these people it was explained that the slight operation suggested by the Clinic was probably different from those they were speaking about as it was simply an opening into the antrum and was most unlikely to need repeating at a later date.

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ficial results in themselves that the one now being suggested to them would not do this although it was regarded as being necessary if beneficial results from the treatment were to be obtained within a reasonable time. But such results would only be obtained by carrying out the after treatment in exactly the manner prescribed.

It was particularly emphasised that the work of the Clinic must not be regarded as an operation to cure asthma or anything else but simply as a treatment as in fact it was

(2) The idea of going to bed to treat their colds this was new to most of them and seemed tedious and unnecessary. To those who suffered from repeated colds it seemed that they would have to spend a great deal of their future in bed. They were told that the time thus spent would depend largely on themselves. The object of the treatment, it was explained was to clear up the greater part of their catarrh in the first few weeks intensive treatment and then to build on this and prevent its recurrence by stopping each cold however slight promptly and completely. They were assured if that were done exactly an early control of their colds could be expected.

(3) That they had already tried various treatments without relief and that there seemed to be very little hope of obtaining it. They frequently expressed the opinion that they did not feel justified in undertaking any new treatment that made no promise of success if it meant putting both themselves and their families to increased inconvenience.

(4) The fact that they had no one who could or would be willing to look after them when they were in bed with colds. This was a real difficulty. For anyone to be able to go to bed at the first sign of a cold and to stay there till all signs of it have cleared up there must be people in the home who at least willing to get the patient's meals and to fill inhalation flask as required.

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A sympathetic attitude towards the patient and the trouble from which he suffers is also necessary if he is to be enabled to carry out the treatment properly. Where a sympathetic attitude is lacking very few people have sufficient moral courage to go to bed at the first sign of a cold and to stay there until it is quite gone which might be long after the time when those around him regard him as being quite well.

It was thus essential to have those in charge of the home present when first discussing the treatment in order that this could be pointed out. Where sympathetic help was wanting no useful purpose could be served by proceeding further.

(5) That some people could not afford to take the three or four months from work which were necessary in order to enable them to carry out the treatment properly. This problem was left in the hands of the Almoners. They dealt with it so adequately that it was extremely rare for anyone who really wanted the treatment to be debarred from having it on this account.

When all arrangements had been satisfactorily made an admission slip was given for the patient to enter hospital when a bed became available.

Each patient was kept in hospital for forty eight hours before the antra were opened and during this time was shown by the Sister in Charge how to inhale in the manner required. In the great majority of cases the opening into the antra was made under a general anaesthetic. Sometimes local anaesthesia was used the nose being packed thirty minutes prior to operation with gauze soaked in a mixture of Cocaine Hydrochloride 20 per cent in distilled water (1 part) and Adrenaline Hydrochloride 1/1000 (2 parts). Local anaesthesia was chosen when it was considered to be more suitable to the patient and the circumstances in which the work was being done but not on account of the severity of the asthma.

The operation itself took some six to eight minutes to perform. It was never followed by any serious complication, and only in the rarest cases was it ever necessary to keep the patient in hospital for more than the two weeks that had been arranged. It was never found necessary to postpone the simple operation because of asthmatic attacks, no matter how severe they might be, although a hypodermic injection of adrenaline was sometimes necessary before the anæsthetic was begun.

In those who had repeated attacks of asthma while in hospital prior to operation it was only rarely that the attacks continued after the antra had been opened and while the patient was still there. This may of course have been merely psychological. It happened so regularly, however, that it indicated some connection between the opening of antra and the relief of asthma much more intimate than mere suggestion. When asthmatic attacks did recur after the antra had been opened and while the patient was still in hospital they were generally much less frequent and less severe than they had been previously. On only one occasion was really severe asthma met with soon after operation, the patient developing status asthmaticus a week later. It continued for three days and from then on recovery was completely uneventful.

On three or four occasions the inadvertant administration of a small dose of aspirin soon after operation precipitated a severe attack in patients susceptible to it, but this settled down in the course of a few hours. It may be mentioned here that a number of patients highly susceptible to aspirin have been treated. In some of these nasal polyps were present but the blood pressure was not recorded. They all followed the usual course and nothing was noted which indicated that this vaso-vicary interfered in any way with their chances of getting better.

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need to use them in the same way on first going home and later in the treatment of subsequent colds was strongly emphasised

Towards the end of their second week in hospital patients almost invariably showed marked signs of improvement. The eyes and skin were clearer the nasal breathing freer their appetite much improved and they themselves were always ready to say that they felt very much better. These changes might be regarded as being due to the rest in bed but that they were really due to the clearing up of the nasal discharge was shown by the fact that when patients caught a cold on the way home or soon after arriving there and were still confined to bed their original symptoms returned and did not clear up again till the nasal discharge was once more brought under control. They did not clear up permanently until as a result of treatment, the chronic nasal discharge itself had completely disappeared.

Practically all who were treated for chronic nasal catarrh whether they suffered from asthma or not caught a cold on the way home or soon after returning there from hospital. In the non-asthmatic patients this was of comparatively little importance, as the consequent return of symptoms caused little real inconvenience in themselves and cleared up again as the cold got better. But in asthma it meant a return of the attacks and that was much more distressing. It was found, however, that no matter how severe this cold might be nor how distressing the consequent asthma it made little or no difference to the patient's prospect of eventually getting well and within the same reasonable time.

When treating chronic nasal catarrh it had always been the custom to get the patients up and fully dressed for a couple of hours on the day previous to going home and then on the next day to have them taken home by car. In the early days of the Clinic the same custom was followed with asthma patients who were instructed to go to bed im-

During their stay in hospital patients were confined strictly to bed and the antra after they had been opened were washed out with normal saline every day or every second day

In children this lavage had to be abandoned in most cases the child's resistance making it inadvisable because of the risk of middle ear infection. The age at which children tolerate intral lavage varies considerably. Sometimes a child of five or six years of age would submit to it quietly while other children even up to the age of twelve years would often resist. As a general rule it can be carried out successfully in those over the age of ten but the greater number of those under that age did not have their antra washed out at all. The only real difference then noticed was an increased discharge from the nostrils during the first eight to ten days. This discharge must have caused some discomfort (a discomfort which would certainly have been more marked and more complained of in older patients) but in all other respects these children seemed to get on just as well as adults whose antra were washed out regularly.

This fact may seem to indicate that regular lavage was merely a means of making patients more comfortable and of little therapeutic value. Nothing definite can be said on this question however beyond recording that occasional intral lavage while in hospital always seemed to be helpful in adults. In the early years of the treatment of catarrh it was the main after treatment employed and always it seemed with beneficial results.

Of the benefit derived from the inhalations there was no doubt at all. They were used in exactly the same way as has already been described on page 22. Apart from their soothing effect they were the main factor in clearing up the discharge in the nose. They were used continuously during the patient's waking hours while in hospital, and the

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treatment once again. Suggestions were then made as to the best methods to adopt to avoid future colds so that the convalescent period might be shortened as much as possible. Care was to be taken to avoid draughts by not placing the patient's bed between the openings of doors and windows or a fireplace. This was especially important as hot water inhalations were being used. Members of the family or others with colds were to be kept away from the patient as far as possible to avoid his re-infection.

The question of baths was especially emphasised as the habit of taking a hot bath and then wallowing about after it is regarded as one of the commonest causes of catching colds. Instructions were given that while still in bed all washing of the patient was to be done as promptly and with as little exposure as possible and all unnecessary washing avoided. When up and about he was to have a warm bath only when it could be followed by a cold shower or when he was prepared to go to bed immediately after it. Hair washing was to be omitted in the early weeks of treatment and washing it with warm water at any time must always be followed by a thorough rinsing with cold.

Instructions were also given as to the patient's movements when permitted to leave his bed at the end of the first two weeks. Typewritten instructions were given which stated that the inhalations were to be stopped one hour before getting out of bed and resumed on returning to it; that the patient was to be fully dressed and was not to sit about in pyjamas and dressing gown; that he was to be allowed up for two or three hours on the first day and a little longer on each succeeding day unless another cold developed in the meantime, and that during this time he was to keep well out of draughts.

Trivial these instructions may seem they were very helpful as they provided against various mistakes people were wont to make and their strict observance shortened the convalescent period considerably.

mediately on arriving home and to stay there inhaling for at least two weeks. In an endeavour to prevent the cold which was caught so often on the way home it was decided to send asthma patients home by ambulance. This meant that the patient did not get up at all while in hospital but was warmly wrapped up and carried by stretcher to the ambulance and then carried by the same means into bed at home. Since then all asthma patients have been taken home in this way. Although some of the difficulty was thus overcome colds were still the rule although they seemed on the whole to be less severe and to take less time to get better.

With these precautions taken it was somewhat surprising that colds were still caught on the way home but no more surprising than it was to hear at some later stage of the treatment that although some of these same people had as they said gone to bed promptly at the first sign of the onset of a cold and had been there on treatment for two weeks or more the cold had not yet cleared up.

Why these people when warmly wrapped up could not travel a short distance to their homes in an ambulance without catching a cold or could not at a later stage clear up a cold by effective inhalation treatment and confinement to bed in less than two or three weeks is not easily accounted for except as an example of the general difficulty of getting people to deal with colds in a reasonable way. It corresponds with the fact already mentioned that when patients treated for nasal catarrh get better and later relapse as a result of neglecting their colds and are then advised to clear their catarrh once again by a fortnight's intensive inhalation treatment in bed those who do the treatment in their own homes rarely clear it while those who do it in hospital almost invariably do so.

Two or three days before the patient was ready to leave hospital it was customary to interview the relative or friend who was to look after him and to go over the principles of

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treatment once again. Suggestions were then made as to the best methods to adopt to avoid future colds so that the convalescent period might be shortened as much as possible. Care was to be taken to avoid draughts by not placing the patient's bed between the openings of doors and windows or a fireplace. This was especially important as hot water inhalations were being used. Members of the family or others with colds were to be kept away from the patient as far as possible to avoid his re infection.

The question of baths was especially emphasised as the habit of taking a hot bath and then walking about after it is regarded as one of the commonest causes of catching colds. Instructions were given that while still in bed all washing of the patient was to be done as promptly and with as little exposure as possible and all unnecessary washing avoided. When up and about he was to have a warm bath only when it could be followed by a cold shower or when he was prepared to go to bed immediately after it. Hair washing was to be omitted in the early weeks of treatment and washing with warm water at any time must always be followed by a thorough rinsing with cold.

Instructions were also given as to the patient's movements when permitted to leave his bed at the end of the first two weeks. Typewritten instructions were given which stated that the inhalations were to be stopped one hour before getting out of bed and resumed on returning to it that the patient was to be fully dressed and was not to sit about in pyjamas and dressing gown that he was to be allowed up for two or three hours on the first day and a little longer on each succeeding day unless another cold developed in the meantime and that during this time he was to keep well out of draughts.

However trivial these instructions may seem they were really extremely helpful as they provided against various little errors that people were wont to make and their strict observance shortened the convalescent period considerably.

mediately on arriving home and to stay there inhaling for at least two weeks. In an endeavour to prevent the cold which was caught so often on the way home it was decided to send asthma patients home by ambulance. This meant that the patient did not get up at all while in hospital but was warmly wrapped up and carried by stretcher to the ambulance and then carried by the same means into bed at home. Since then all asthma patients have been taken home in this way. Although some of the difficulty was thus overcome colds were still the rule although they seemed on the whole to be less severe and to take less time to get better.

With these precautions taken it was somewhat surprising that colds were still caught on the way home but no more surprising than it was to hear at some later stage of the treatment that although some of these same people had as they said gone to bed promptly at the first sign of the onset of a cold and had been there on treatment for two weeks or more the cold had not yet cleared up.

Why these people when warmly wrapped up could not travel a short distance to their homes in an ambulance without catching a cold or could not at a later stage clear up a cold by effective inhalation treatment and confinement to bed in less than two or three weeks, is not easily accounted for except as an example of the general difficulty of getting people to deal with colds in a reasonable way. It corresponds with the fact already mentioned that when patients treated for nasal catarrh get better and later relapse as a result of neglecting their colds and are then advised to clear their catarrh once again by a fortnight's intensive inhalation treatment in bed those who do the treatment in their own homes rarely clear it while those who do it in hospital almost invariably do so.

Two or three days before the patient was ready to leave hospital, it was customary to interview the relative or friend who was to look after him and to go over the principles of

that five days before this cold became so evident she had awakened in the morning with a slight bronchial wheeze but as it disappeared later in the morning she took no further notice of it. Four days later she awoke with a troublesome cough but still overlooked these symptoms until the next morning when the cold was too apparent to be ignored any longer.

It was pointed out to those looking after her that the cold must have been present before the first wheeze was noticed and this continued neglect would mean a prolonged stay in bed. That is exactly what is happening. The latest report after having been in bed for twenty three days is to the effect that the cold got a little better but then freshened up again and is not yet clear. There is not the remotest doubt that if on the morning of the first wheeze the patient had stayed in bed and inhaled the cold would have cleared up in a few days immunity to colds would have been increased and no asthma attacks would have occurred. As it is convalescence will now be considerably delayed.

At the end of the first two weeks after patients had returned home they were allowed up when reports were received that they were free of apparent symptoms of nasal discharge provided of course that the weather was suitable. This occurred in about 50 per cent of the cases treated but the others were kept in bed for further periods. These varied from two or three days in some cases to six or seven days in others and occasionally when the catarrh was difficult to control it took still a few days longer. Most patients were back in bed again within two or three days of first being allowed up because of another cold and the greater part of the first three months was spent in and out of bed at short intervals clearing up the colds to which they were still susceptible.

From the frequent recurrence of colds during the first few months it might at first sight appear that the intra nasal antrostomy had increased susceptibility to them. This

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During these interviews, emphasis was laid once again on the temperature of the water to be used in the inhalation flask which was to be hot, but never sufficiently hot to burn the skin if spilt. Reference was made to the proper use of the inhalations and instructions given that after the first few weeks, they were to be used only for the treatment of colds and not as a routine practice.

Two weeks was the time laid down for each patient to spend in bed on first returning home from hospital. In actual practice, however, it was really a minimum of two weeks. One of the first principles learned from the observation of asthma cases was that if the catarrh was ever to be cleared up sufficiently to give full relief from symptoms it was essential that each cold should be cleared up completely before the patient was allowed out of bed. This was particularly important with the first few colds contracted after leaving hospital, as it was, to a large extent, on the promptness and completeness with which these particular colds were stopped that the length of convalescence depended.

An example of how convalescence repeatedly became prolonged and the patient's neglect of the rule of treatment often made the treatment tedious to themselves comes to hand as this is being written. "M P", aged 37 years, who lived in the country, complained of repeated attacks of asthma during the previous three years with frequent headaches, nasal obstruction, a poor appetite and frequent attacks of nausea etc. She had had more or less continual colds for several years. Her treatment was begun four months ago. At the end of ten weeks, her nasal and gastric symptoms were much relieved and there had been no attacks of sneezing or asthma for five weeks. She looked very much better, and said that she felt a "different person". She then returned to the country. Four weeks ago, a telephone report said that she had had a severe cold with three or four attacks of asthma. On careful enquiry it transpired

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tions from the treatment happened repeatedly in numerous circumstances that were never known was a further justification of the conviction that delay in convalescence was, in the majority of cases the patient's own fault

It was to meet this delay that the typewritten paper given to each patient before they entered hospital contained the following

On returning home from hospital no result can be expected for at least three months the greater part of which will be spent in bed

This served to meet any protests about prolonged confinement to bed and to allay any impatience but was not really in accordance with the facts as far as the results themselves were concerned

All patients practically without exception showed definite improvement within the first two to three months of treatment both in the lessening of the frequency and severity of their asthma attacks and in the amelioration of most of their other symptoms This very noticeable improvement went a long way towards getting those in whom progress was slow to persevere when repeated need to return to bed during the first four to five months must have in itself become discouraging

The length of convalescence seemed to have no relation to the length of time asthma had been present nor to what had been the severity and frequency of the attacks nor the amount of nasal discharge It varied in different people even when as far as could be seen patients took the same amount of care to carry out the treatment exactly There seemed to be no doubt that although the majority were able to clear up their catarrh sufficiently to free themselves of most of the symptoms and to be well enough to return in about twelve to fourteen days to co-operate with an equal effort for five months to do so This

was not so. The apparent increase was merely the result of the emphasis laid on the rule that any noticeable increase in the amount of nasal and post nasal discharge or any indication of it by the aggravation of symptoms must for the purpose of the treatment be regarded as a cold and treated accordingly.

To recapitulate the history of the average case on returning home from hospital was very much as follows either on the way home or within twenty four to forty eight hours of arriving there a cold developed and was followed within twelve to twenty four hours by attacks of asthma which might last for two or three days. The cold itself and perhaps some bronchial wheezing usually lasted for several days longer but at the end of the first fortnight or so all would have settled down and the patient would be allowed up.

Within the next one to three days signs of the onset of another cold would appear and the patient would return to bed on inhalation treatment the cold clearing up again in some five to ten days the length of time depending mainly upon how promptly it had been noticed and treatment begun. The next time there might be an interval of three or four or perhaps six or seven days before another cold appeared. If treatment were again carried out promptly and effectively the next interval might be ten to fourteen days and so on. The intervals between colds lengthened each time a cold was cleared up completely before getting out of bed but only when it was cleared up completely. Sometimes the control of colds was obtained rather more quickly than this but as a rule it took a little longer.

It has already been said that on making an unexpected visit to a patient's home where he had been reported as being in bed treating a cold he was sometimes found to be fully dressed and walking about. The frequency with which this happened and the reasonable surmise that these devia-

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treatment emphasising at the same time the need for him to make every effort to clear up his nasal symptoms as soon as possible

Complaints about the length of time spent in bed were rarely heard even from those whose convalescence was considerably prolonged. When such complaints were heard it was generally in the later stages of treatment and then only from a few who having received considerable benefits from the treatment regarded themselves as cured and so refused to treat the subsequent colds against which they had been repeatedly warned. These people excused the relapse which they could so easily have avoided by saying that they could not continue the treatment as they could not afford to spend the rest of their lives in bed. Complaints about the amount of time it was necessary to spend in bed in order to get better and the need to return there occasionally in order to clear up the one or two colds a year to which they might still be subject have never been heard from those who have carried out the treatment in the spirit in which they undertook it. This was on the clear understanding that no promises were being made to cure them of asthma but that any improvement they obtained and kept would be mainly due to their own efforts.

When anyone had reached the stage where he was considered to be sufficiently well to be allowed to resume his usual duties he was given permission to do so with the warning that he must be prepared to take any time off that was necessary to clear any future cold. The indications for permission to return to work were a freedom from colds for two or three weeks and a corresponding freedom from wheezing or bronchial spasm together with a marked improvement in the symptoms of ill health from which he had previously suffered. The one contra indication was that if the skin still looked pasty and the eyes heavy as described on page 14 the underlying catarrh could not

may have been due to some idiosyncrasy on the part of the patient or to some difference in the nature of the discharge and was somewhat similar to the fact noted so often that patients suffering from nasal catarrh and no asthma could clear up their catarrh and bring their colds under control in a shorter time and with much less trouble than those who suffered from both

In undertaking the treatment of nasal catarrh in any patient who had ever suffered from asthma even if from only one definite attack the full treatment for asthma was always insisted upon. It was felt that otherwise if the catarrh were not cleared up completely the asthma attacks might return at any time and then persist

In deciding when a patient was well enough to be allowed up reliance had to be placed on the reports received from whoever had undertaken to look after him. As a general rule these reports were dependable but from time to time a few searching questions were necessary in an endeavour to find out the real state of affairs. In all cases of doubt the decision was left to the Medical Officer in Charge of the Clinic

To reach a decision the first necessity was to ascertain to what extent the secondary symptoms had cleared and when that was satisfactory to be quite sure that there had been no sign of wheezing or asthma for at least forty eight hours. Consideration of the symptoms was much more important than the amount of discharge itself which sometimes seemed to continue even though the symptoms arising from it showed decided improvement. This could only be ascribed to a marked diminution in its toxicity which would not be unexpected after several weeks intensive treatment. Occasionally when convalescence was prolonged and it was felt that the patient was not carrying out the treatment exactly although he was still anxious to do what he could it was found advisable to allow some relaxation in the bed

That suggestion plays a more or less important part in all treatments is a matter of common knowledge and although every effort was made to exclude it in this work the object of which was to find out what happened to asthmatics when freed of nasal catarrh it could not be excluded altogether

As has been said prospective patients were given clearly to understand that the treatment to be undertaken was simply a treatment for nasal catarrh which was regarded as an important factor in the causation of their disabilities and that no pretence of any kind was being made of a cure for asthma as their congenital tendency to it would remain the same whether their attacks recurred or not. When they inquired what were the prospects of getting better they were truthfully told that anyone who would stop his catarrh completely and then keep it from recurring by controlling his colds had good prospects but that beneficial results could be obtained only by strict attention to the rule of treatment and to what extent they would be prepared to do that would be a matter for themselves.

The fact remains however that these patients were in association with the Clinic for months although they rarely visited it and were or were supposed to be carrying out a strict rule of treatment that expected them to go to bed immediately with a cold and not to get up until permission was given for them to do so. Such an association and the rule of treatment itself could not fail to create some confidence in people who naturally had undertaken it only in the belief that there would be some likelihood of relief.

On the other hand the following facts are opposed to the idea that suggestion was a factor in bringing about the results obtained.

(1) In the early months of the Clinic there was no system of reports and people were simply told as they had always been told in the treatment already described for

tively But, as already stated, it was always advisable to carry out the first two weeks of this second treatment in hospital

Remissions are always likely to occur in any case of asthma during which there is freedom or comparative freedom, from attacks for months or sometimes for years It is very doubtful whether, during these periods, there is ever the same freedom from the other accompanying symptoms such as paroxysmal sneezing, gastric disturbances shortness of breath on exertion, tiredness etc, as is always obtained as the result of this treatment Nor is there any real resemblance between such remissions and the freedom from attacks obtained from the treatment herein described where it occurs with extreme regularity within three to five or six months and where, once it is established it persists indefinitely unless a subsequent neglect of colds with the consequent re establishment of catarrh ushers in the attacks again

The argument against the value of this treatment that in many cases attacks recur when the treatment is abandoned carries no more weight than would any similar argument against the value of the benefits derived by the majority of patients attending Diabetic Clinics, if a few of them suffer a relapse when they become too lazy to continue with the treatment prescribed

The fact that these asthma patients do relapse when they allow their catarrh to become re established is one of the strongest arguments in favour of the principle of the treatment and of the thesis that catarrh is the most important factor in their condition

A question raised from time to time has been to what extent were the undoubted results obtained by this treatment due to the clearing of the persistent nasal discharge and how far were they due merely to suggestion ?

nasal catarrh, that if they were to get results it would be necessary for them to go to bed to clear up their colds. Some sixty or eighty patients were treated in this way and they were *not kept under supervision and had very little contact with the Clinic after leaving hospital*, but the results obtained were highly satisfactory and sufficient to warrant the application of the treatment to all of those who sought it.

(2) Personal association with the Clinic at any time was very restricted. Only on the rarest occasions was anyone ever seen there more than half a dozen times after leaving hospital and most of them were not seen more than two or three times. After the first few months of treatment, any personal association with the Clinic at all was extremely rare, but patients still continued to improve and to keep well.

(3) Prospects of relief were spoken of as being possible only for those who carried out the treatment exactly. The majority did not co-operate in this way.

(4) *Where patients had got well and had been free from asthma attacks for months, any return of the attacks that was noted, was almost invariably associated with colds or a series of colds which had been neglected. This was equally true for those in whom the association of their asthma attacks and catarrh had seemed a little doubtful when they were first seen.*

and (5) In the case of children, neither occasional association with the Clinic nor the treatment was sufficient to rid them of their asthma attacks. In the

to in a later chapter) in whom no surgical nor hospital treatment was employed the results were equally good. Yet the only contact with these children at any time, was while they waited during one or two interviews with their mothers.

some other method in which the patient did not have to help himself. No question would then be raised about the value of the results at all.

In favour of the method employed is the fact that it will clear up nasal catarrh and it is the only method known to the author that will do so. By its means people suffering from repeated colds and those who are accustomed to using any number up to ten or twelve handkerchiefs a day to clear

cesses and only recurs at lengthy intervals with a cold. At the same time they can free themselves of the symptoms of ill health which arise from the absorption of this discharge and if they suffer from asthma from the attacks to which they have been subject.

Asthma has been rightly described as the one ailment for

be obtained. If the undoubted relief given by this treatment was due to suggestion then much more effective suggestions could be given than by the method herein described and should have been given to these chronic sufferers long ago.

But if on the other hand as seems quite evident it was due to the elimination of catarrh then the elimination of catarrh is the first indication for treatment in all cases of asthma and the education of the public on the harm resulting from its neglect a matter of primary importance.

That colds are the most important factor in the causation of asthma could scarcely be doubted by anyone who has seen these patients before treatment was begun and seen them again a few months after the condition resulting from the neglect of colds—chronic nasal catarrh—had been



CHAPTER FIVE

SPECIAL INVESTIGATION INTO THE EFFICACY OF THE TREATMENT

At the end of five years, the results obtained by clearing catarrh and the proper control of colds among asthmatic patients appeared to be so beneficial that several medical Demonstrations were given of some of those who had undergone treatment. As a result of the last two of these demonstrations, which were given before highly critical audiences suggestions were made that the scope of the Clinic should be widened. A proposal to this effect was duly received but it was thought that better purposes would be served by seeking a complete and independent investigation into the results that could be obtained by the clearing of nasal catarrh in this manner. This investigation was carried out under the auspices of the Department of Health, Sydney.

In order that these results might be properly appraised in any such investigation, it was suggested that a number of patients who were known to have suffered from persistent and severe asthma for years and to have tried various forms of treatment without relief (in other words, cases which were generally regarded as being "hopeless") should first be examined by leading physicians who kindly undertook to give up time to do so and that they should then be treated in the manner already described. Their progress would then be watched by the same physicians who, when sufficient time had elapsed to enable them to arrive at a true evaluation, would report on the results. In making this request, it was particularly specified that a number of cases of known allergic origin should be included.

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Even a change of locality in the same district is in itself sometimes helpful. The low lying areas around Sydney ranging from fifty to one hundred feet above sea level, seem to be particularly favourable to the development of asthma and catarrhal conditions generally. It was on this account that people living in these low lying areas were not regarded as suitable for quick results in arriving at an estimate of the efficacy of any treatment for catarrh.

As the main object of the investigation was to discover what extent asthma could be benefited by the already tried treatment for catarrh alone and as even a change of locality might in itself be beneficial apart from the treatment it was established that no one should change his address during the first twelve months after treatment was begun.

In the actual working of the Clinic neither of these types of patients was ever excluded. Of those ultimately treated 58 per cent came under one or other of these headings and a number of them came under both.

Arrangements were made that when a sufficient time had elapsed all or as many as necessary to enable a true verdict to be arrived at were to be examined and reported upon individually. And further as it is mainly on the testimony of patients and their friends that results in asthma can be properly estimated it was arranged that questionnaires should be drawn up and be sent out from time to time to enable each patient to give his own account of them. At the end of the first year the results obtained in the patients already treated during that period were to be considered and a decision made as to whether they were such as to justify the time and work necessary to continue the enquiry.

When all arrangements were made patients were referred for treatment which in each case was just the same as it used in the past and already described. A formal

A suitable scheme was drafted for the carrying out of this investigation. It was designed to cover all the points of the thesis submitted so that an authoritative opinion could be expressed in due course. Owing to the exigencies of the time, however, this scheme was never carried out in all its details. Arrangements were made at the same time for a number of what were apparently "hopeless" cases of asthma, together with a number of definite cases of allergy, to be referred for treatment. These cases were to be fully examined and X rayed previous to treatment, seen from time to time during its course, and finally re examined once again and reported upon. It was also arranged that no patients thus referred and who wished to have the treatment, should be refused it except when it seemed plainly evident that they had no intention, or were unable to co operate in carrying it out.

In order that a reliable verdict could be arrived at within a reasonable time it was agreed to exclude the following classes of patients in whom it was thought that convalescence would be delayed unduly

(1) Young unmarried people over sixteen years of age, who, in the past, had always been found to be more or less unwilling to co operate

(2) People living in low lying areas around Sydney (the so called "catarrhal areas") It was thought that these people might take longer to get rid of their catarrh on account of the locality in which they lived

Locality is always a question of importance in the treatment of asthma. That most asthmatics are better when away from the sea level is generally accepted. To be able to send patients suffering from asthma to higher localities inland, is a therapeutic measure highly valued by physicians

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he remaining forty-eight, twenty five were asked to be at the Demonstration

is thought that fifteen to eighteen would be all that we seen in the time available, but others were asked was expected as so often happens, that a number make excuses and stay away The whole twenty-nded however, and all were seen and expressed on with their treatment

is given what was regarded on that afternoon as a state of the results so far obtained in these forty ents

	None	per cent
CASE		
IMPROVEMENT	6	12½
ROVED	13	27½
II IMPROVED	13	27
A MUCH IMPROVED	16	33

oved" included those whose treatment was too or anything very definite to be said about results

h Improved meant a definite lessening of the y and severity of the asthma attacks, together with nent in general health

, much improved" meant a freedom from attacks oral months with a very marked rovement in health

result of this Demonstration, it led to con-
Clinic for another twelve m or to allow
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No 1

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tion was made of each patient's nose to see that there was nothing to interfere with access to the antra and a type written sheet similar to that described was given to each patient setting out what would be required in the after treatment. On behalf of the physicians a full physical and x ray examination of each nose and chest was made by independent observers and recorded elsewhere.

All precautions were taken to exclude as far as possible the influence of suggestion. The directions for after treatment given to each patient stated clearly that the treatment was entirely for nasal catarrh and that no suggestion was being made of any cure for asthma. As a further precaution the patients were not segregated in any way while in hospital but treated as ordinary nasal cases in Ear Nose and Throat wards. No verbal promise was made of any results to be obtained and no attempt was made to induce a patient to undertake the treatment by holding out hopes of relief. The whole atmosphere surrounding the Clinic was indeed of such a highly sceptical and critical nature that no patient could possibly be led to expect a miracle.

During the first twelve months a number of cases which were regarded as suitable for this enquiry were referred to the Clinic and fifty three of them were treated.

A Demonstration of the results so far obtained in these patients was given before members of the hospital staff in October 1944. Of the fifty three patients treated five had failed to report as required in accordance with the rule of treatment or to co operate in any way after leaving hospital and were therefore omitted from further consideration as they could not contribute any evidence either for or against the treatment.

Of these five cases three had been treated in the first two months of the Clinic's work.

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Of the remaining forty eight twenty five were asked to be present at the Demonstration

It was thought that fifteen to eighteen would be all that could be seen in the time available but others were asked as it was expected as so often happens that a number would make excuses and stay away The whole twenty five attended however and all were seen and expressed satisfaction with their treatment

Below is given what was regarded on that afternoon as a fair estimate of the results so far obtained in these forty eight patients

		per cent
WORST	NONE	—
NO IMPROVEMENT	6	12½
IMPROVED	13	27½
MUCH IMPROVED	13	27
VERY MUCH IMPROVED	16	33

Improved included those whose treatment was too recent for anything very definite to be said about results

Much Improved meant a definite lessening of the frequency and severity of the asthma attacks together with improvement in general health

Very much improved meant a freedom from attacks for several months with a very marked improvement in general health

As a result of this Demonstration it was decided to continue the Clinic for another twelve months in order to allow a further number of patients to be treated

Forty three were treated in this second year

From now on the cases treated will be spoken of as coming under one or other of two groups Group No 1

comprises the fifty three patients treated in the first twelve months and Group No 2 comprises the forty three patients treated in the second twelve months

In May, 1945, it was decided to send out questionnaires to the forty eight patients in Group 1 who were known to have made some attempt to carry out the treatment. Forty four of the forty eight sent out were filled in by the patients and returned. In reply to the question "Have you carried out the treatment exactly?" nineteen replied yes, eight replied no seven replied that they had done so reasonably well, and eight that they had done so as far as circumstances would permit. Two did not answer this question.

The other questions asked were for details as to the frequency and severity of their asthma attacks since treatment whether they still suffered from any nose trouble and if they knew of anything that they could now eat or smell which they could not do before treatment, and if so to please state what it was. A further question asked whether the treatment had made any difference to their general health.

To denote their opinion of their asthma they were given the choice of 'cured', 'much relieved', 'relieved', 'no better' or 'worse'.

When being first interviewed, and repeatedly afterward each patient had been told that he was never to regard himself as 'cured' as there was nothing in the treatment that could possibly affect his congenital susceptibility to asthma. In their replies nevertheless, five stated that they were 'cured' and eleven that they were 'very much relieved', twenty replied 'yes' to the question "much relieved". As the idea of being 'cured' was forbidden to these patients and there was nothing between that and 'much relieved' to indicate the improvement they had made, it is felt that all these thirty six patients, the five 'cured', the eleven 'very much relieved' and the twenty 'much relieved', must accordingly be grouped under the one heading "much

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relieved' It was known to denote complete freedom from asthma for many months in all cases with the exception of two, each of whom had had one attack during that period

A general analysis of replies from these patients who had then been under treatment for periods varying from ten to twenty months is given below

Asthma

Much relieved	36	82 per cent
Relieved	7	16 "
Unrelieved	1	2 "
Worse	0	— "

Nose Trouble

(All patients had some nose trouble and nearly all had very marked nose trouble previous to treatment and the results depended entirely on clearing it up)

Quite Clear	26	59 per cent
Much Improved	11	25 "
Improved	5	11½ "
No improvement	1	2½ "
Not answered	1	2½ "

General Health

Marked Improvement	25	57 per cent
Much improved	8	18 "
Improved	9	20½ "
No improvement	1	2½ "
Always good	1	2½ "

An estimate of the results as expressed in these questionnaires giving due regard to both asthma and general health as compared with the estimate of results in the same cases at the demonstration in 1944 is

Very much improved	26	59 per cent
Much improved	7	16 "
Improved	10	23 "
No improvement	1	2 "

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In order that the analysis of these questionnaires should be exact and completely impartial it was kindly undertaken by Mr F C McCleery, Bio metrician, Department of Agriculture, Sydney When returning them, Mr McCleery stated in a covering letter "Even the most cursory perusal of these replies should make it evident that the patients themselves are very satisfied with the results of treatment'

The tables drawn up by him are given below

ASTHMA STATUS AFTER TREATMENT

Age Years	Much relieved	Relieved	No better
0—21	18	2	0
22—42	12	3	1
43—	6	2	0
Total	36	7	1
Percentage	82%	16%	2%

NASAL STATUS AFTER TREATMENT

Age Years	No complaint now	Discharge still but marked improvement	Little or no improvement
0—21	14	6	0
22—42	7	7	1
43—	4	2	2
Total	25	15	3
Percentage	58%	35%	7%

GENERAL HEALTH AFTER TREATMENT

Age Years	Health much improved	Health improved	No difference in health
0—21	14	4	1
22—42	9	6	1
43—	3	5	0
Total	26	15	2
Percentage	60%	35%	5%

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TABLE SHOWING ASSOCIATION BETWEEN NASAL HEALTH AFTER TREATMENT AND FREQUENCY OF ASTHMA ATTACKS AFTER TREATMENT

NASAL HEALTH	ASTHMA FREQUENCY OF ATTACK				
	Weekly to fort Daily	Monthly to infre- nightly	Free for 3 months	Totals for 3 months	health
No complaint now	—	—	14	11	25
Discharge still but marked improvement	—	4	6	5	15
Little or no improvement	3	—	—	—	3
Totals	3	4	20	16	43

When the Clinic had been in existence for about two and a half years it was considered that sufficient time had then elapsed for reliable conclusions to be drawn from the results so far achieved amongst the 48 patients who have already been described as comprising Group 1. It was therefore decided that several of the physicians who had so kindly agreed to interest themselves in this treatment should make a physical examination of each of these patients or as many of them as were available and at the same time question them and those who had been looking after them during their treatment (and who were also asked to attend) as to the state of their general health and any effect which the treatment had had on the frequency and severity of what had previously been their persistent attacks of asthma. A number of afternoons were set aside for this purpose and the patients were called up in the order in which they had been treated eight being asked to attend on each afternoon as eight was considered to be as many as could be properly examined in that space of time. After three afternoons had been spent in careful physical examinations and questionings it was generally

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agreed that each series of cases had so far shown very much the same improvement and from what had already been seen of the treatment there was every reason to think that the other patients also would show similar results. It was therefore decided that enough had already been seen on which to come to reliable conclusions on the efficacy of the treatment.

A noteworthy feature of these interviews was that those patients who were not quite as well as some of the others present were always ready to acknowledge whatever improvement they had made and to ascribe the fact that they were not more improved to their own neglect of colds and failure to carry out the treatment properly.

It would undoubtedly have been more satisfactory if the original plan had been carried out and all the patients treated had been physically examined and those who had looked after them interviewed. Not that physical examinations in themselves could throw much light on the frequency or severity of any asthma attacks which might still be taking place. Estimation of improvement in an asthma case *always depends on the information given by the patient himself and the people who live with him.* This information had already been supplied by all these people in the replies to questionnaires and the decision made to regard these twenty three cases as a reasonable and sufficient cross section of the clinical material available would be fully endorsed by 'even a cursory perusal of them'.

It was agreed that of the twenty three patients examined twelve had given a history of considerable improvement as the result of treatment. All these twelve patients were accepted as having definitely suffered from asthma and in practically every instance the history showed that they had

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so suffered to an incapacitating degree and that they had previously undergone various forms of treatment without obtaining relief of their condition. At the time of the examination they gave a history of definite improvement in general health and freedom from attacks of asthma for one to two years. Four other patients gave a similar history of definite improvement since treatment but had suffered from one attack of asthma within the previous twelve months.

The other seven patients indicated that they had also benefited from the treatment but their improvement was not as marked as in the sixteen mentioned above due in some measure to their inability or refusal to give the necessary care to colds which they had contracted.

The general opinion expressed was that the majority of the patients had derived substantial benefit from the treatment as shown by improvement in their general health, a reduction of their physical disabilities and a partial or complete restoration of their capacity for ordinary daily duties and that the results compared very favourably with other recognised methods of treatment in showing the patients a new way of life—which was in fact all that the treatment had ever attempted to do.

A typical example of the four mentioned above who had had an attack of asthma within the previous twelve months was one who had been specially recommended as a suitable test for this treatment. When first seen at the Clinic she gave a history of having had asthma attacks two to three times a week for eighteen years and persistent attacks every night for the previous six to eight months. She had been receiving regular treatment for several years without any relief.

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General Health

Marked improvement	20	47%
Very much improved	12	28%
Much improved	9	21%
Improved	1	2%
No improvement	1	2%

The following are Mr McCleery's tables. In each of them the figures given are the numbers of patients falling into the different cross classifications. The figures in brackets are from the 1945 questionnaires. Those not in brackets are from the later 1946 questionnaires.

ASTHMA STATUS AFTER TREATMENT

Age Years	Much relieved		Relieved		No better	
0—21	19	(18)	1	(2)	0	(0)
22—42	13	(12)	2	(3)	0	(1)
43—	8	(6)	0	(2)	0	(0)
Total	40	(36)	3	(7)	0	(1)
Percentage	93%	(82%)	7%	(16%)	0%	(2%)

NASAL STATUS AFTER TREATMENT

Age Years	No complaint now		Some dis- charge still but marked improvement		Little im- provement or none	
0—21	14	(14)	6	(6)	0	(0)
22—42	9	(7)	6	(7)	0	(1)
43—	5	(4)	3	(2)	0	(2)
Total	28	(25)	15	(15)	0	(3)
Percentage	65%	(58%)	35%	(35%)	0%	(7%)

GENERAL HEALTH AFTER TREATMENT

Age Years	Much improved		Improved		No difference	
0—21	16	(14)	3	(4)	1	(1)
22—42	12	(9)	2	(6)	1	(1)
43—	5	(3)	3	(5)	0	(0)
Total	33	(26)	8	(15)	2	(2)
Percentage	77%	(60%)	18%	(35%)	5%	(5%)

SPECIAL INVESTIGATION

A general summary of the results obtained in Group 1 as observed two to three years after treatment is

Very Much Improved	29	67%
Much Improved	8	19%
Improved	6	14%
No Improvement	0	—
Worse	0	—

The results obtained in three successive years in patients included in Group No 1 are set out below for the sake of convenient comparison. The results in the first column (1944) are after forty-eight of them had been under treatment for periods varying from four to fourteen months in the second column (1945) after forty four of these patients had been under treatment for ten to twenty months and in the third column (1946) after forty three of them had been under treatment for two to three years

	1944	1945	1946
Worse	0	0	0
No Improvement	6 (12½%)	1 (2%)	0
Improved	13 (27½%)	10 (23%)	6 (14%)
Much Improved	13 (27%)	7 (16%)	8 (19%)
Very Much Improved	16 (33%)	26 (59%)	29 (67%)

Group 2

In this group of thirty eight questionnaires were sent out and thirty five were returned. These patients were more definite in their claims to improvement twelve stating that their asthma was cured, six that it was very much improved and fifteen that it was much improved. For reasons already given the thirty three are classified in the following analysis as much improved

Asthma		
Much Improved	33	94%
Improved	2	6%
No Improvement	0	—

BRONCHIAL ASTHMA

Nose

Quite Clear	26	74%
Very Much Improved	3	8½%
Much Improved	3	8½%
Improved	3	8½%
No Improvement	0	—

General Health

Marked improvement	9	25%
Very much improved	21	60%
Much improved	3	9%
Improved	2	6%
No improvement	0	—

Mr McCleery's tables for Group 2 are as follows

ASTHMA STATUS AFTER TREATMENT

Age Years	Much relieved	Relieved	No Better
0—21	24	0	0
22—42	8	2	0
43—	0	0	0
Total	32	2	0
Percentage	94%	6%	0%

NASAL STATUS AFTER TREATMENT

Age Years	No complaint now	Some discharge still but marked improvement	Little improvement or none
0—21	15	8	1
22—42	6	3	1
43—	0	0	0
Total	21	11	2
Percentage	62%	32%	6%

SPECIAL INVESTIGATION

GENERAL HEALTH AFTER TREATMENT

Age Years	Much improved	improved	No better
0—21	17	7	0
22—42	7	2	1
43—	0	0	0
Total	24	9	1
Percentage	71%	26%	3%

A summary of the general progress of patients in Group 2 is given below

	1945	1946
Very much improved	21	22
Much improved	8	11
Improved	6	2
No improvement	0	0
Worse	0	0

Of the eighty six patients considered in this report eight did not reply to questionnaires. Three of these whose ages ranged from forty five to fifty five years suffered from persistent and severe asthma and were in receipt of invalid pensions. From reports given by their relatives it is known that they all obtained considerable benefit from the treatment two of them to a very marked degree.

In the case of one of these it is also known that for reasons of his own he declined to make a written statement to that effect. This patient had been using adrenaline repeatedly before treatment and had always needed an injection after walking up his stairs or up a slight incline from his home. Some five months after treatment had begun his wife reported that although he had been walking up the stairs and up the street repeatedly since treatment he had needed only three injections of adrenaline in all since leaving hospital. Also that he was an entirely different person but

could be much better still if he would only carry out the treatment more exactly

Another four of this eight were much younger and are also known to have received definite benefit. They refuse to keep in touch with the Clinic because of their expressed objections to continuing to treat their colds in bed in the manner required.

The remaining patient suffered from frequent and severe attacks of asthma which had not been relieved by the various treatments she had tried previously. She lived alone in one room with no one to look after her when she had to stay in bed and after the first three months, could not continue with the treatment any longer. Some two years later she reported that she had been free of asthma for several months, an improvement which she ascribed to medicine obtained from her local chemist. It was this patient who, in her questionnaire in 1945 reported that she had not improved.

The most controversial part of this treatment has been as has already been stated, the indications for the opening of the antra. In the course of this investigation, all cases were X rayed and most of those in Group 1 and all in Group 2 had had their antra washed out by an independent observer before being passed on for treatment. The X ray results in Group 1 cannot be given as some of the reports were afterwards mislaid. In Group 2, however, they are available and out of thirty eight cases, eight had reports that "all nasal sinuses are clear". Of these eight, all gave a history of marked nasal obstruction, seven a history of continual colds, and six of repeated attacks of sneezing and excessive nasal discharge, as was shown by the number of handkerchiefs they were using daily.

Notwithstanding this, however, each of them stated in his reply to his questionnaire at a period somewhere between

fifteen and twenty months after treatment had begun, that his asthma was cured that his nose was quite clear and that his general health had improved to a marked degree.

Equally interesting in this respect is the case history of another of these patients J H aged 29 years who was first seen in May 1945. He gave the history of having had asthma since he had been a baby. For the previous seven years he had had attacks three to four nights a week, but in the last six months of this period he had been having them every night and morning. He had very marked nasal symptoms which included repeated attacks of sneezing more or less continual colds constant nasal obstruction no sense of smell and a profuse nasal and post nasal discharge. Asthma attacks were repeatedly precipitated by laughing too much talking and excitement.

He had attended a Hospital Out-door Department for three years where after skin tests had been carried out he had been receiving weekly injections. He was on a special diet and had a special mattress on his bed. He was not one of those whose X ray showed his sinuses to be clear as it showed a haziness of both antra. In spite of this and of his nasal symptoms the report given as the result of the independent examination that was made before treatment was commenced was specially marked there is no evidence of sinusitis. During the three years of outdoor hospital treatment that he had already received no suggestion was made of any necessity for nasal treatment.

Yet five months after this treatment began he reported that he was having no nasal discharge no sneezing attacks that his nasal breathing was quite clear and that his sense of smell had been fully restored. Although he had in accordance with directions from the Clinic given up his special diet and special mattress on returning home from hospital his asthma was very much improved. Twelve months later, in his reply to his questionnaire he stated

that his asthma was definitely very much relieved that his nose was quite clear with only very occasional nasal discharge and that he was very much better in health and had had only one slight cold during the twelve months

Even to accept appropriate treatment for him just as it has done of so many others in whom the diagnosis of sinusitis has been made on purely clinical evidence

A criticism repeatedly levelled at the treatment in individual cases was that the beneficial results were only accidental and anyway they would not last. That the results who lo with an results

not last is disproved immediately by a glance at the figures given on page 99 setting out the results obtained in the same cases in three successive years

That this very marvellous improvement may not continue indefinitely is unfortunately only too true. But when the asthma attacks begin to reappear and the general health to deteriorate it will only be as the result of wilfully neglected colds a circumstance over which the patient alone has any control. Given the correct treatment of colds the improvement would certainly have lasted and it is of the utmost importance to teach these people not to neglect them

A surprising and repeated objection to the time wasted in this enquiry was that whatever the results might be asthma cannot be cured. No pretence has ever been made to cure asthma with this treatment or to cure anything else. But if all the people with incurable conditions were left to work out their own salvation there would be little left to do in the practice of medicine

Diabetes and chronic Bright's Disease are merely examples of the numerous ills which are not always expected to be cured, but no reasonable person would ever suggest that attempts should not be made to ascertain if possible how they may best be relieved. If a high degree of relief could possibly be obtained in these and in similar conditions by an intensive treatment during a comparatively short period and then maintained by the bed treatment of a subsequent and occasional cold it would be an advance of inestimable benefit to millions. And the amount of misery and distress endured during the course of chronic asthma is no less than that experienced in numerous other chronic conditions and its relief not less ardently desired.

The conclusions to be drawn from this enquiry are

(1) That a highly critical investigation has shown that a number of people suffering to an incapacitating degree from severe and persistent asthma who apparently had no hope of relief for their condition by ordinary methods of treatment were, as a result of this treatment restored to health and freed from their asthma attacks for prolonged periods.

(2) That these beneficial results are not merely temporary for a few months but can be made lasting and progressive by understanding and acting upon the principle of treatment involved.

In this investigation ninety-seven people in all were treated. So-called hopeless cases were asked for and the only restriction on any such case referred was a willingness and ability to carry out the treatment. Although only twenty-three of these received special physical examinations before a decision was arrived at the others who had been treated were also available and were equally willing to attend had they been called upon to do so and it is obvious that it was considered that there was ample evidence without them. There is every justification for this decision. It is always on the reports of patients themselves and of those with

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whom they live that results in the treatment of asthma must be based on the fact that the treatment of asthma attacks avoid the stimuli and nervy and are governed by their disability, are themselves the best judges of improvement in their own health. If any further evidence is needed it is best obtained from those with whom they live and who have witnessed and been inconvenienced by their suffering for years. All the testimony given by these people both at medical demonstrations and in their replies to questionnaires unshakably confirmed the improvement they had made.

Physical examination in these cases can do little either to confirm or disprove these benefits. If, after years of suffering and misery people then find themselves free of their attacks of asthma and their accompanying symptoms of ill health able to eat what they like and live where they like and to lead a normal life in a normal manner, they are not in need of any medical examination to tell them, or to tell those with whom they live, that they are better. They feel no necessity to consult anyone about their health. They have health.

The result of this investigation was to confirm what the observation of hundreds of cases had already made apparent that people with asthma can almost without exception, get rid of their attacks and regain normal health if they will follow out this treatment exactly and clear the nasal catarrh. And having regained their health they can easily maintain it as long as they wish. An occasional cold promptly may appear dogmatic, but the fact is true and that it is true that one who will take the trouble to follow these cases by the method described and which is equally true.

PAROXYSMAL SNEEZING

Hay fever is so closely associated with asthma that it must receive consideration in any treatise on the treatment of that ailment and especially so when that treatment is based entirely on the treatment of nasal infection. No attempt will be made here to discuss hay fever in any way fully but it will be dealt with under the heading of its most characteristic symptom paroxysmal sneezing. The association of this symptom with nasal catarrh and its dependence upon it will be best illustrated by case histories.

In the early years of the treatment of nasal catarrh by the method described in this book excessive sneezing was noted as a frequent symptom mentioned by those seeking relief. In the comparative list of symptoms given on page 34 40% of the patients suffering from nasal catarrh and no asthma complained of excessive sneezing among those suffering from asthma the percentage was 69. It is probable that the figure in the former group is on the low side. The sneezing complained of was always said to come on in attacks and was invariably associated with other nasal symptoms such as obstruction and discharge (which was mostly watery but sometimes mucoid or muco purulent) and frequently with marked nasal itching polypoid and loss of the sense of smell.

In dealing with these cases it has never been attempted to classify them under different headings. Hay fever Allergic Rhinitis or Vaso-motoric Rhinitis as a rule no questions were asked as to whether a classification to be made. If ever heading it might be simply as one of the "allergic" cases.

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whom they live that results in the treatment of asthma must be based finally. People who have frequent and severe asthma attacks, who must always make repeated efforts to avoid the stimuli that cause them, who are continually tired and nervy and off colour and whose diet and place of living are governed by their disability, are themselves the best judges of improvement in their own health. If any further evidence is needed it is best obtained from those with whom they live and who have witnessed and been incommoded by their suffering for years. All the testimony given by these people both at medical demonstrations and in their replies to questionnaires, unshakably confirmed the improvement they had made.

Physical examination in these cases can do little either to confirm or disprove these benefits. If, after years of suffering and misery people then find themselves free of their attacks of asthma and their accompanying symptoms of ill health, able to eat what they like and live where they like and to lead a normal life in a normal manner, they are not in need of any medical examination to tell them, or to tell those with whom they live, that they are better. They feel no necessity to consult anyone about their health. They have health.

The result of this investigation was to confirm what the observation of hundreds of cases had already made apparent that people with asthma can, almost without exception, get rid of their attacks and regain normal health if they will follow out this treatment exactly and clear up their nasal catarrh. And, having regained their health they can certainly maintain it as long as they are prepared to stop an occasional cold promptly and completely. This statement may appear dogmatic, but it is made with the firm conviction that is true and that it will be known to be true to anyone who will take the trouble to clear up nasal infection in these cases by the method herein described, or by any other method which is equally effective in doing so.

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In dealing with these cases it has never been the custom to attempt to classify them under different headings such as Hay fever, Allergic Rhinitis or Vaso-motor Rhinitis and as a rule no questions were asked which would enable such a classification to be made. Excessive sneezing under whatever heading it might possibly be classified was regarded simply as one of the symptoms of nasal catarrh and

treated accordingly and the results thus obtained were such in the great majority of cases that no need was ever felt for any other classification and consequent variation in the treatment to be employed. Sometimes there was a definite history that the sneezing attacks took place only in the pollen season. In some patients the attacks occurred throughout the year but a large proportion of these said they were worse in the spring or autumn. In others the attacks occurred at any time but were worse in the early morning and often stopped by about 10 a.m. Many patients complained that they were highly susceptible to dust, certain flowers, perfumes, face powder, etc.

Dr George Bray* stated that the allergic nose forms at least a third of the Rhinologist's practice and so there can be no possible doubt that a large proportion of the numerous cases treated by this method in the past have been definitely allergic. No discrimination in diagnosis was attempted, however, and all were treated in the manner herein described and no attempt of any kind was made to avoid the offending irritants.

Where sneezing was a marked feature but associated with attacks of bronchial spasm the routine treatment for asthma was always carried out. But when there was no accompanying asthma the treatment given was that already described for catarrh—the patients being sent home by car and then allowed to go about as they wished while free of colds.

The first case treated in the Clinic when it opened in 1937 was W. D., aged 40 years, who complained that he had suffered from what had been described to him as 'hay fever' for the past eight years. The symptoms mentioned were severe attacks of sneezing throughout the day but more particularly in the early morning and again at night when in bed. These attacks were accompanied by profuse

**Journal of Laryngology and Otology* (1943) 58 p. 219

PAROXYSMAL SNEEZING

watery nasal discharge, very troublesome nasal irritation nasal blockage and loss of the sense of smell. When these attacks first began they occurred only from September to December, but each year they had been getting more trouble some and more prolonged. In the previous year they had lasted from September until the following March.

When seen in October 1937 he said that the attacks which had already begun that year were the most severe that he had yet experienced. His general health had been deteriorating each year and he felt that unless he were able to obtain some relief he would not be able to carry on much longer with his work. His skin was pasty, he was decidedly underweight, he had marked shortness of breath on exertion and he always felt exhausted. He said that he had undergone various treatments during the previous few years and that his antra had been washed out on several occasions, but without any permanent relief. He had never had attacks during the winter months but his general health had not improved during these intervals. Dust and certain flowers especially poppies always aggravated his condition.

His antra were opened a week later at the height of what he called his worst attack and the usual treatment for catarrh was carried out. He had no further attacks of sneezing while in hospital and he left there at the end of the regulation two weeks. He was not confined to bed on returning home as is the custom with asthma cases but carried on the usual after treatment prescribed for nasal catarrh. A fortnight later he looked and felt very much better.

He continued to inhale for two to three hours a day and reported in January 1938 that he had had one or two small colds which had cleared up promptly under treatment in bed but no return of his former sneezing attacks. In a letter received in June 1938 he said "I am quite well and am having no trouble of any kind."

BRONCHIAL ASTHMA

When seen again in September, 1938, he was still very well and free of trouble, but was warned that as his "hay fever" season had come round again, he must be very careful of any colds that might develop. Three weeks later he contracted a cold and had some return of his sneezing attacks. He went to bed immediately on inhalation treatment, at the first sign of this trouble, but got up after being there for better. A few increased severe attacks attended the Clinic and was sent home to bed to clear up his cold completely.

After ten days inhalation treatment in bed, he was once again free of trouble and was allowed up. He had two more slight colds during the next few weeks, to which he gave adequate treatment and there was no sign of the return of the sneezing attacks. From then on very little was seen of him, except that he was known to be still inhaling for an occasional cold until October, 1942, when he attended a Demonstration of cases that had been treated at the Clinic. There he mentioned that his health was excellent (as his appearance indicated) that his nose was quite free, that his sense of smell was restored and that he had put on a considerable amount of weight. He stated that dust and flowers no longer affected him and that his sneezing attacks were gone. In December, 1943, at another Demonstration, he declared that he was still quite as well. He has not been seen since but reports received quite recently indicate that his improvement has been fully maintained.

✓ This case presents certain interesting features. Although skin tests were made there seems, from the history, to be reasonable doubt that it was really a case of what had been diagnosed to him as "hay fever" — a case of true nasal allergy. Nevertheless it cleared up as a result of nasal treatment for catarrh alone, and has remained clear over a

period of years. There seems to be every prospect of it remaining clear indefinitely as long as his colds are not grossly neglected.

Again, all attacks of acute rhinitis in this patient, and in all patients who were subsequently treated, were always looked upon and spoken of and treated as colds. There seemed to be no reason why they should not be since they all responded to treatment in exactly the same way as similar attacks in which the diagnosis of a true cold could not possibly be doubted.

Furthermore, in spite of the repeated warnings that in pollen sensitive individuals nasal operations should not be carried out during the pollen season, this man was operated on at the height of his worst attack, and the results were immediately beneficial. It may be mentioned here that since then, numerous patients suffering from the same trouble have been operated on in the same way and under the same conditions. No harmful effects have yet been noted and every patient who has made any attempt to carry out the post-operative treatment has invariably been the better for it.

A third feature of this case was that, although he remained well during the 1937-38 season, his sneezing reappeared in October, 1938, following a neglected cold. The twenty-four hours bed treatment that he gave this cold relieved his symptoms temporarily, but could not possibly clear it up and it grew worse during the following few days. The sneezing attacks also grew worse and persisted till he was seen six days later and sent home to clear his cold up completely by inhalation treatment in bed.

He was then kept under supervision for the remainder of the 1938-39 season and after that it gave him very little trouble to keep himself well. It seems quite evident that unless he had been kept under supervision by the Clinic for twelve months or more, he would undoubtedly have allowed the cold developed in October, 1938, to run on, his

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PAROXYSMAL SNEEZING

On examination the inferior turbinates were pale in colour there was some watery discharge in the nose and naso pharynx and some slight dullness of her antra on transillumination. Her skin tests were reported to have shown strong reactions to a number of allergens.

Her antra were opened in October 1943. This was followed by two weeks treatment in hospital and as she had had occasional attacks of asthma by a further two weeks treatment in bed at home. During the following three months she had a number of small colds which with the exception of one were treated in the manner prescribed. In February 1944 she reported that she was very much better that her nose was quite free to breathe through and that her sense of smell had returned. Also she said that she was having very little sneezing and that her appetite and gastric troubles were much improved.

In May 1944 she reported that she was not well and that for the last three weeks she had had a cold which she had been unable to treat for various reasons. When seen a few days later her skin was once again pitted, her eyes looked heavy and her nose was blocked and discharging freely. She agreed to go home to bed to clear it up and this she did. In July she reported that the rattle was again out in blossom and giving her no trouble and in November that she had had no further colds. Eighteen months later she reported once again that she had had no cold for many months, no return of her nasal symptoms and sneezing attacks, no stomach trouble of any kind and that she was feeling splendid.

Another but much younger patient was F.M. aged 14 years who had had frequent and severe attacks of sneezing for several years accompanied by a profuse watery nasal discharge. He had a marked degree of nasal obstruction and it frequently kept him awake at night. Colds were fairly frequent but not so frequent as in the past. His appetite was good but he was very short of breath on exertion.

catarrh to become re established and his symptoms to return. This is a fact which has been observed repeatedly and it is a fact that is so important that it must be emphasised once again that if good results are to be obtained a certain amount of supervision **MUST** be kept over the treatment. This is especially necessary during its early stages as it takes some considerable time before the patient can be got to realise the importance of colds as a cause of his condition and the fact that their neglect is almost certain to bring back his symptoms once again. At a later stage when all that is possible has been done to impress this upon the patient it must be left mainly to his own good sense to decide whether he wishes to continue to treat them or not.

Another case of persistent sneezing typical of hundreds of similar cases treated by this method with the same beneficial results is interesting because the condition was regarded as being entirely allergic by the Department from which it was referred. It also illustrates the need for supervision in the early months of treatment.

M B aged 44 years had been troubled with persistent attacks of sneezing for years a condition that was becoming steadily worse. The attacks occurred all the year round but were worse in March and April from oak trees and in July and August from wattle both of which grew around her home. She stated that while engaged in housework she sneezed continually and had to carry a towel under her nose while sweeping and dusting to catch the watery discharge which dripped from it continually. This was accompanied by swelling of her eyelids and a most distressing irritation in her eyes and nose.

She always seemed to have a severe cold. She had marked nasal obstruction and no sense of smell. She suffered from repeated attacks of nausea and flatulence and marked breathlessness on exertion. When the sneezing attacks were particularly severe they were occasionally followed by an attack of asthma.

During the previous twelve months he had had wheezing attacks with colds, accompanied by slight bronchial spasm and, during the last few months, he had not been able to sleep comfortably with less than three pillows. There was a family history of asthma.

His nose had been cauterised on two occasions and he had had skin tests at the Out patient Department of a public hospital followed by thirty-five injections for dust and horse dandruff. He was then referred to the Clinic as no improvement was shown. His skin was pasty and his eyes looked heavy. He said that dust always caused sneezing but proximity to horses had never troubled him.

X ray showed all sinuses to be clear.

Both antra were opened in October, 1945 and this was followed by the usual bed treatment prescribed for asthma patients. There were a few colds during the first few months which were treated rather indifferently and, in February, 1946 his mother reported that he was very well and had started work, that his sneezing attacks were gone, that his nose was quite clear and that he was sleeping soundly each night.

At the end of the first nine months, it was reported that he was quite well, that his nose was quite clear, that he had had no further attacks of sneezing and that he could sleep comfortably on one pillow and could run up several flights of stairs without distress. He still gave some attention to his colds but although it was not all that was required he continued to remain well. When seen two years after beginning the treatment he was looking particularly well, was breathing freely through his nose and stated that he had had no return of his sneezing attacks or of any of his former trouble. In the previous twelve months he said that he had had only one cold and it had been cleared up promptly with the dry inhalation.

sults obtained in those patients an account of whose special investigation is set out in Chapter V. As a result of the special examination of twenty three of them already mentioned in that chapter their noses were in each case found and reported to be clinically clear. The effects on the nasal symptoms of seventy eight of them as set out in their replies to questionnaires after periods of one to three years had elapsed since their treatment had begun were as follows. One replied that there was no improvement in his nasal symptoms. All the others stated that these symptoms were definitely improved. seventy one said that they were very much improved and fifty three of these stated that their noses were completely clear. Of these seventy eight patients practically all had previously complained of marked nasal obstruction and paroxysmal sneezing and many of them of troublesome nasal irritation and more or less complete loss of the sense of smell.

That among the many hundreds of cases treated in the past at least some hundreds were genuine cases of nasal allergy is beyond question. Among the seventy eight specially mentioned above the proportion was very much higher. Nearly all of them had suffered for long periods from severe and long standing asthma which had not responded to any treatment. In practically all this treatment had consisted mainly of repeated courses of injections of specific allergens in the Out door Departments of Public Hospitals. As the ability of those in charge of these departments to distinguish between cases which are identical with those commonly associated with the allergic nose and those which are accepted as being typical of those which are regarded as being allergic in origin

is not high, the cases drawn from the continued series which were treated for nasal allergy have been highly beneficial.

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Six months later she reported that there had been no further colds or nose trouble of any kind and that she was having no gastric disturbances or bilious attacks. She could run up stairs without distress, the hot flushes were gone, she had gained nine pounds in weight and she said that she felt better in every way than she had done for many years. She had had no headaches for several months. When seen twice during the next eighteen months, she reported that her colds were extremely rare, that her general health had been steadily improving, and that there had been no return of the nasal irritation or sneezing attacks.

Practically all of those who suffered from paroxysmal sneezing and underwent this treatment derived similar benefit from it in its early stages and the majority of those whose subsequent history is known, have remained well. Some drifted away after the first few months and although they were well when last seen, their subsequent history is unknown. A few disappeared soon after their treatment had begun and it is more than probable that most of these did not keep it up and that at least some of their trouble has returned.

Like all case histories given in this book, those cited above are not given as proving anything in themselves but merely as typical examples of the many hundreds of people suffering from paroxysmal sneezing who have been treated in this way during the last twenty years and who have almost invariably obtained relief. The only qualification this statement needs is to point out once again that the treatment they underwent was a treatment and not merely an operation which was expected to "cure" anything in itself. Like all medical treatments the results depended upon, and were in the main proportional to the exactness with which it was carried out.

Although this estimate of results may sound somewhat extravagant it is fully supported by the acknowledged re-

That such is the case in all allergic rhinitis is not being maintained dogmatically, as sufficient cases have not yet been treated, or have not been treated with the supervision and controls necessary to establish it as a scientific fact. But it is strongly maintained that in all cases of 'hay-fever,' the first indication for treatment is to clear up the chronic nasal catarrh and when this is done, specific allergic treatment can then be adopted in any case that might still be in need of any further medical attention.

There is ample justification for the conviction that any person who suffers from repeated attacks of sneezing and all the misery that goes with them, whatever medical classification his condition may be placed under, who is willing to undergo the slight operative procedure already described and then to clear up any subsequent colds promptly and completely, has every prospect of arriving, at an early date, at the stage where his nasal symptoms no longer trouble him and his general health is markedly improved. It is equally reasonable to believe that having arrived at this state of health he will be able to maintain it indefinitely as long as he is willing to clear up promptly and completely any future, and what soon become very occasional colds.

and similar, both in those whose condition was purely catarrhal and in those in whom it seemed truly allergic

The second is, that whatever dire results may have been noted from the surgical treatment of the allergic nose either during or apart from the pollen season, no such results have been noted following the simple opening of the antra in the manner described. But this must be qualified by the reiteration of the fact that before undertaking this operation it has been the unvaried custom to insist as far as is humanly possible, that the patient's subsequent colds must be stopped by him promptly and completely and to *refuse to undertake the treatment of any case where there was no reasonable assurance that this would be done.* But even in those cases in which the rule of treatment was not afterwards adhered to no untoward result has been observed

The results above mentioned mean that there has been more or less complete removal by this treatment of all nasal symptoms such as paroxysmal sneezing marked nasal itching, nasal obstruction and loss of the sense of smell in catarrhal and allergic cases alike. From these facts it seems to be quite evident that while certain irritants had been sufficiently irritating to produce severe attacks of sneezing when the nasal mucous membrane was in a state of hyperexcitability as a result of the continual irritation caused by a chronic nasal discharge they were not sufficiently irritating to produce the same result when the discharge was removed and the mucous membrane had had time to return to normal

This would not be surprising in purely catarrhal cases as it is well known that many people who are not subject to attacks of sneezing will often sneeze repeatedly when they have an acute cold and are brought into contact with some irritant that does not ordinarily affect them. It is surprising however that it should have happened in so many cases of allergic rhinitis and would seem to indicate that the most important factor underlying this condition is chronic nasal infection

The first case treated at the Clinic ten years ago was a child of eight who had been having asthma attacks since she was three. Her mother suffered from asthma and her younger brother from chronic bronchitis. The child's attacks occurred more or less weekly and were always more prolonged and more severe when associated with colds. The smell of menthol and fresh paint always precipitated an attack so did any emotional upset. She was described as being very nervy and was unable to take part in other children's games because of shortness of breath on exertion. Her appetite was poor and various articles of food had to be avoided as they were known to cause attacks.

As this patient was seen in the early days of the Clinic the treatment was not carried out in the systematic manner that was later evolved. The inhalations were used regularly for two or three hours a day during the first few weeks after the antra had been opened and the child had left hospital and two to three days were spent in bed when any definite cold developed. About three months after the treatment begun her mother reported that although there had been an occasional attack of asthma with her colds during that period the attacks had been very much less frequent and less severe than they had been before.

When seen four months later although the treatment was still being carried out in the same incomplete manner the mother reported that the child was having only a very occasional and slight attack of asthma and was much improved in her general health.

She could now take part in her school's annual sports and to win one or two events. The mother said that menthol had not affected the child at all since returning home from hospital and that during a recent painting of the house the smell of fresh paint had not troubled her in any way.

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If the results already described can be achieved in adults who have arrived at a state of more or less complete invalidism after many years of suffering it is only reasonable to infer that these years of ill health could have been avoided by appropriate treatment in its early stages. The early stages of innumerable cases of severe asthma are in childhood and it is in the application of this treatment to children in whom asthma is such a common and distressing condition that its chief interest lies.

During the last twelve years many children have been treated in this manner with results similar to those obtained in adults and dependent in the same way on the amount of co operation given in carrying it out. Co operation however has here been easier to obtain as most mothers are only too anxious to do what they can to get their children better and the amount of time lost in bringing colds under control by treatment in bed is not a matter of so much importance.

The antra have been opened in the majority of these children as the whole aim for several years was to observe and record the effects on asthma of the treatment already described for catarrh. More recently however it has been the custom to treat young children without opening antra or giving them any preliminary hospitalization. This has simplified the treatment greatly and the results thus obtained will be considered in due course.

The youngest child treated in the manner already described was three and a half years of age and no one younger than this has had the antra opened mainly because there has been no inclination to open them at an earlier age.

This case illustrates what has been observed in all children who have undergone the treatment since then. Those in whom the systematic treatment has been carried out exactly, have got rid of their asthma and those in whom it was carried out indifferently got corresponding relief. This particular child was treated in the early days of the Clinic before the precise and systematic treatment had been evolved. As a result her catarrh was never cleared up, but merely improved by the hospital treatment and the inadequate attention which had been given to subsequent colds. In consequence her asthma attacks were never completely abolished, although they were strikingly reduced both in frequency and severity and in proportion to the degree to which the discharge had been lessened both in amount and its ability to irritate.

The general health, however, was markedly improved. The child's emotional instability which had been a conspicuous feature before treatment was so much improved in three months that the mother was considerably impressed. Articles of food which had to be rigorously avoided no longer gave any trouble. And air borne irritants, such as the smell of paint were no longer able to cause sufficient irritation to precipitate an attack.

In addition, her shortness of breath on exertion which had

as shortness of breath on exertion is extremely common in asthmatic children and very few of them are ever able to join their schoolmates in outdoor games. Their continued inability to meet others on equal terms both at school and at play, is one of the greatest of their disadvantages and a menace to their future prospects. That this treatment will remove the disabilities that prevent them from doing so is established beyond all doubt.

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whom suffered from repeated colds. At the end of the first three weeks she was allowed up, but was back in bed with a cold at the end of twenty four hours and was kept there for a further seven days. She was then up for ten days and in bed for fourteen, up for two days and in bed for twenty seven, and then up for twelve days and in bed again for ten.

During the last eight weeks of this period she had no asthma. She was then up for nine weeks and towards the end of this period was reported to be looking very much better, to be much less irritable, less short of breath on exertion and the rings under her eyes were said to be gone. Sweeping, dusting and excitement were no longer causing attacks.

She then developed another cold with a slight attack of asthma, the first she had had for many weeks, and was in bed for nine days. She was then up for three weeks before developing another slight cold with which she had no chest symptoms at all.

At the end of the following nine months, the child was looking extremely well, had put on a lot of weight and her appetite was described as "tremendous". She was "full of energy" and breathing clearly through her nose. In this interval, she had had four colds, two with no chest symptoms, one with slight asthma and one with bronchitis.

She has had no asthma since then and only an occasional cold which has been easily controlled. A number of reports have been received from time to time stating that the child has been keeping "wonderfully well".

The last report received three and a half years after treatment began stated that she was "extremely well and the picture of health". She was then eating and sleeping well, playing all games at school and had had no sign of a cold or of any other trouble for many months.

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When last seen six years after treatment began he was a healthy looking boy leading a normal healthy life. His mother stated that he had had no sign of asthma for three or four years but had had a number of small colds which he indicated, had been rather neglected and also an occasional attack of bronchitis. A warning about the continued neglect of colds was treated lightly by the patient and his mother both of whom seemed quite convinced that he was cured.

D.M. aged 8 years had had repeated attacks of bronchitis since he was eighteen months old and asthma for three years. Her attacks which were getting more frequent and more severe occurred at least once a week. She looked extremely sick with a pasty skin and heavy bloodshot eyes and was very short of breath on exertion. She had suffered from repeated attacks of hives. Bananas always produced attacks.

She had attended the Out-door departments of several hospitals without relief. Her father was a chronic invalid her mother suffered from tuberculosis and asthma and her one brother and two sisters from chronic bronchitis.

Nasal showed a little thickening of the lining mucosa of one antrum but otherwise the sinuses were clear.

Her treatment began three and a half years ago. On first returning home from hospital she was in bed with a cold (there were several colds in the house) for nineteen days and she was then up for one day only and back in bed with another cold for a further seventeen days. She was then up and well for nine weeks but then had to return to bed with another cold which lasted two weeks but during this time had neither asthma nor wheezing.

When seen nine months after beginning the treatment she was looking particularly well and had had no signs of asthma for several months. She had also had no hives was free of shortness of breath on exertion and had put on fourteen

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pounds in weight. Bananas no longer affected her. At the end of a further six months, her mother reported that the child had had no further sign of asthma, was very active and was now "the only healthy one of the family."

M C", aged 13 years, was seen in 1944. He had had bronchitis since he was a baby and asthma for eleven years, with attacks practically every night for the previous twelve months and sometimes two or three attacks during the day. He was very short of breath on exertion, very nervy and irritable, had a pasty skin and heavy looking eyes and complained of repeated headaches. He had been treated as an outpatient at several hospitals and had done breathing exercises daily during the previous twelve months. His weight was 4 stone 10lbs.

His treatment began in June 1944. On returning home from hospital he was in bed for two weeks, up for three days and then in bed again for four weeks. He was then up for seven days, in bed for five days then up for sixteen days and back in bed for three weeks.

At the end of the first five months his mother reported that he had had no sign of asthma for the last three weeks and had gained twelve pounds in weight. He was then up each day for four months and at the end of that time, was reported to be "marvellously well" and completely free of asthma. His headaches were completely gone, he was no longer short of breath on exertion and he had gained nineteen pounds in weight.

He then caught another cold which kept him in bed for ten days. Two months later his mother reported he was still free of asthma and had made a further seven pounds in weight.

When seen in June 1945 he was "very well" and had gained a further 10 pounds in weight.

When last seen six years after treatment began he was healthy looking boy leading a normal healthy life. His mother stated that he had had no sign of asthma for three or four years but had had a number of small colds which she indicated had been rather neglected and also an occasional attack of bronchitis. A warning about the continued neglect of colds was treated lightly by the patient and his mother both of whom seemed quite convinced that he was cured.

D M aged 8 years had had repeated attacks of bronchitis since she was eighteen months old and asthma for three years. Her attacks which were getting more frequent and more severe occurred at least once a week. She looked extremely sick with a pasty skin and heavy bloodshot eyes and was very short of breath on exertion. She had suffered from repeated attacks of hives. Bananas always produced attacks.

She had attended the Out door departments of several hospitals without relief. Her father was a chronic invalid her mother suffered from tuberculosis and asthma and her one brother and two sisters from chronic bronchitis.

X ray showed a little thickening of the lining mucosa of one antrum but otherwise the sinuses were clear.

Her treatment began three and a half years ago. On first returning home from hospital she was in bed with a cold (there were several colds in the house) for nineteen days and she was then up for one day only and back in bed with another cold for a further seventeen days. She was then up and well for nine weeks but then had to return to bed with another cold which lasted two weeks but during this time she had neither asthma nor wheezing.

When seen nine months after beginning the treatment she was looking particularly well and had had no signs of asthma for several months. She had also had no hives was free of shortness of breath on exertion and had put on fourteen

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Still another reason was that, after a few months of treatment with marked improvement, a particularly severe or neglected cold would put the patient's health back to what it had been before. The parents then, instead of endeavouring to find out what had gone wrong, would perhaps decide that the outlook was once again as hopeless as they had always been taught to believe and that it was useless to persevere.

The following case history is an example in which these circumstances arose but fortunately the parents were not content to let the treatment go altogether and endeavoured to find out in what way it had gone wrong.

'B.D.' aged 7 years was first seen in 1946. He had had asthma for six years, generally once or twice a week in the winter time and practically every night during at least six of the warmer months of the year. He was very short of breath on exertion and excitement always caused attacks. During the summer months he had a persistent and troublesome cough which necessitated his mother getting up to him two to three times each night. He had a pasty skin and heavy looking eyes, had not put on any weight for many months and always slept propped up on three pillows.

Some three years previously he had been sent to the country in search of health but had had severe asthma while there. On returning to Sydney he had a number of extremely severe attacks for two to three weeks and then developed pneumonia. Following this he had had skin tests and a series of injections but as his mother said in spite of this, and various other treatments she had tried, he had been steadily growing worse.

Treatment began in March 1946. On returning home from hospital he was in bed for three weeks and then up for seven days. He was back in bed again for three days and up for ten, then in bed for five days and up for six. He then developed measles and was in bed for twelve days, but with no wheezing or asthma.

sion with his parents on this neglect of treatment, it was decided to put him back to bed and to carry out the treatment more strictly in the future. A few days later, while still in bed he had a slight attack of asthma which was the first he had had for several months. Since then, more attention has been given to the treatment and he has had only an occasional cold each of which has been cleared up promptly.

When last seen, four years after beginning the treatment he was looking perfectly well. He had had no further signs of asthma and no headaches, no shortness of breath on exertion and had increased his weight by 3 stone 10 lbs since he was first seen. It seems perfectly safe to say that he will get no return of his trouble till he begins to neglect his colds again a matter which must be entirely in his own hands.

These case histories illustrate the results obtained in those who got better and who were the great majority of those treated. A few however, did not improve to the same degree but here again, as in the case of adults, each history showed that failure to do so was almost entirely due to failure to carry out the treatment correctly.

Speaking generally, practically all patients followed a similar course during the first three or four months of treatment. This means that they had a repetition of more or less small colds which were treated with inhalations while confined to bed and they showed a marked improvement in general health with a lessening both in frequency and severity, of their asthma attacks.

At the end of that time, however, a few parents were inclined to grow careless about the treatment, mainly because the patient had already shown so much improvement and his condition appeared to be so much less serious than it used to be, that it was felt that there was no need for further concern as he would probably then get better whether he followed the treatment or not.

of the return of his cough during the past summer and had put on six pounds in weight in the previous four months

Emotional upsets are frequently the precipitating cause of asthma attacks in children. This emotional instability is much the same condition as that which has already been described as the nerviness which so frequently accompanies the continual absorption of nasal and post nasal discharge in adults and which clears up when this discharge is removed. That chronic nasal discharge is also the cause of a great deal of nerviness in children is scarcely open to doubt as in no cases in which the treatment was carried out reasonably well did emotional upsets continue to precipitate attacks while the nasal discharge was still kept under control.

J.T. aged 6 years was a typical case of psychosomatic asthma. When first seen he was described as a problem child and had been undergoing psychological treatment for many months. It was not however until his catarrh was eliminated that emotional disturbances ceased to be the cause of his asthma attacks.

He had had bronchitis since he was a baby, asthma since he was three years of age and he had had two attacks of broncho pneumonia within the previous twelve months. About every three months he had severe asthma attacks lasting two to three days during which he went alarmingly blue around the lips and he had slight attacks about every two weeks with the onset of a cold. He had marked shortness of breath on exertion and he lost about three to four weeks schooling each term.

His attacks were always precipitated by any emotional upset. He was difficult to manage, had rapid changes of mood and was the cause of numerous disturbed nights to his parents.

His treatment began in March 1944. He was difficult to keep in bed while in hospital and equally difficult while in bed with colds after returning home. During the first three

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At the end of this time he was extremely well his cough at night had disappeared and he was sleeping comfortably on one pillow. During the next three months he was up and about most of the time with no chest symptoms and very little shortness of breath on exertion.

He then caught another cold with continual wheezing for two weeks and more or less daily attacks of asthma. His parents were considerably worried as he had been so well and then quite suddenly had seemed little better than before treatment. They were very definite in their statement that they had carried out the treatment exactly and sought an interview to see where it had miscarried.

It then transpired that three weeks earlier the child had

ing factor) he was allowed up without any reference to the Clinic. Three days later he developed the cold spoken of above which was in reality an aggravation of the one he
had seen

weeks. When seen six months later he was looking particularly well and had had only one slight cold during that period with no chest symptoms of any kind. Once again he was able to play without any sign of shortness of breath and slept each night on one small pillow.

When seen recently nine months after the last report given above his mother said he was an entirely different boy. He had had no colds and no asthma during this interval. His mother said that occasionally he might sneeze a little sniffly in the evening but with the aid of the dry inhalation it had cleared up overnight and he had lost no time from school. He was very energetic had had no sign

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He was very short of breath on exertion and could not join in outdoor games. His appetite was poor, he frequently complained of gastric pain, eggs, milk and certain vegetables repeatedly caused attacks of asthma. Another cause of attacks was any emotional upset.

He was extremely thin and had a pasty skin and heavy looking eyes. His mother said that he had been attending an Out Patient Department for five years and his antra had been washed out on several occasions. Also that during that period he had been steadily getting thinner and weaker and that finally she had been told that nothing further could be done for him.

His X ray reports showed chronic bronchitic changes in both lungs with well marked bronchiectasis in both lower lobes.

His treatment commenced almost immediately. Three months later his mother reported that he was looking very much better, his appetite had improved, his gastric pains were gone, and his asthma attacks were very much less frequent and less severe.

He returned to school at the end of four months. Throughout that winter he had occasional colds which were properly treated and when seen ten months later, he was looking extremely well. He could then breathe freely through his nose, his appetite was excellent, he had gained one stone in weight and could play without distress and so vigorously his mother said that a number of children were not allowed to play with him.

He has had no further attacks of asthma. When seen three years after treatment had begun, he had increased his weight by three stones and was then playing football and other strenuous games and was losing no time from school. When seen recently, six years after treatment had begun, all this improvement had been fully maintained. He was

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months of treatment he had several small colds with repeated asthma but the attacks were never severe and he recovered from them more quickly than he had done before

In August, 1944, his mother telephoned to say that he had another cold, but, for the first time for several years had had no asthma with it. Also that he was much less irritable and emotional upsets were no longer causing attack although he was just as difficult to manage. Twelve months after beginning treatment, his mother reported that he had had a couple of slight colds during the previous six months but no signs of asthma. He was then no longer short of breath on exertion and had put on over a stone in weight. His father's report was that he was decidedly less nervous and much more self reliant.

When seen again at the end of a further twelve months, he looked extremely well. His mother reported that he had had only one slight cold and no asthma during that period. He had missed only two days from school and that was because of bad weather. When seen three years after his treatment began he was still looking extremely well. His mother then said that he had had only two colds during the previous twelve months, neither of which was accompanied by any signs of wheezing, and that he could join in all games without any distress. She spoke of him as being an entirely different child.

The following case history is given here as typical of the results obtained in numerous children and also because the child had bronchiectasis. F. J., aged 8 years was seen in 1942. He had had asthma since 11 months old and repeated attacks of sneezing and constant colds. His asthma attacks were sufficiently frequent to cause him to lose a lot of schooling. He also had bronchitis from about the same age and even when comparatively well had a more or less continual wheeze. He had marked nasal obstruction and a troublesome cough which was frequently followed by vomiting.

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He was very short of breath on exertion and could not join in outdoor games. His appetite was poor, he frequently complained of gastric pain, eggs, milk and certain vegetables repeatedly caused attacks of asthma. Another cause of attacks was any emotional upset.

He was extremely thin and had a pasty skin and heavy-looking eyes. His mother said that he had been attending an Out Patient Department for five years and his antra had been washed out on several occasions. Also that during that period he had been steadily getting thinner and weaker and that finally she had been told that nothing further could be done for him.

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He returned to school at the end of four months. Throughout that winter he had occasional colds which were properly treated and when seen ten months later, he was looking extremely well. He could then breathe freely through his nose, his appetite was excellent, he had gained one stone in weight and could play without distress and so vigorously his mother said that a number of children were not allowed to play with him.

He has had no further attacks of asthma. When seen three years after treatment had begun he had increased his weight by three stones and was then playing football and other strenuous games and was losing no time from school. When seen recently, six years after treatment had begun all this improvement had been fully maintained. He was

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then a big, strong healthy boy with no physical disabilities of any kind

During the last two to three years it has been felt that the probationary stage of this treatment is over and that the good results arising from the elimination of catarrh have been so clearly demonstrated that some variations in the routine treatment could be allowed. The first variation has been to teach each patient before leaving hospital how to use a hypodermic syringe and what doses of adrenaline are necessary to keep his attacks under control

The second variation is of much more importance. It is the development of a systematic treatment for young children by inhalations in bed without any preliminary hospitalization or the opening of antrum. In those who have been treated in this way the results have been equally as good as those previously observed and they have been obtained more easily and consistently. The simplicity of the whole procedure produces no anxiety to the parents and very little trouble in the home. It is so simple and so effective that it opens up an extensive field for the application of this treatment to children.

A description of it will be given on pages 136 *et seq* but before proceeding it must be noted that in young children cases are still sometimes encountered in which the sinus involvement seems at the present time to be too advanced to allow of reliance on inhalation treatment alone.

Such a case was J. A. aged 4 years who was first seen in 1947. He had had eczema as a baby and still had a little from time to time. He had had asthma since he was five months old, had rarely been free of it for a week at a time and as a general rule had had attacks every night for weeks in succession.

These attacks in the past had been controlled by adrenaline injections but more recently they had not produced the desired effect. He used to have a well marked nasal

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discharge but not since his adenoids had been removed two years before. He suffered from repeated colds and attacks of sneezing, could not sleep on less than two large pillows and was extremely short of breath on exertion. His skin was pasty, his eyes looked heavy and he was described as being extremely irritable.

Dust had always caused attacks especially in the spring time and any emotional upset or proximity to horses precipitated an attack immediately. He had had skin tests on various occasions and several series of injections but his asthma attacks were steadily becoming more frequent and more severe.

As a X ray revealed complete dullness of both antra it was thought that treatment by inhalations alone would be found to be too tedious and so his antra were opened in July 1947. The child experienced no distress as a result of this and left hospital within the usual two weeks. He then remained in Sydney under treatment for two months during which time he had two or three small colds but very little asthma and then returned to the country where he had always lived.

A month later his mother reported that he had a large appetite, an excellent colour and had put on several pounds in weight. Two weeks later he had a heavy cold with two or three attacks of asthma a day. A week after this cold was better and he had been allowed up, he developed another cold accompanied by a high temperature and repeated and severe attacks of asthma. This was followed by a series of small colds for four weeks but a fortnight later his mother reported that he was again free of colds and that a recent severe dust storm which had lasted several days had caused no more than a little sneezing.

Three weeks later he had another cold without any asthma but he developed an attack a week later which necessitated his being taken to hospital. This was his last attack of asthma up to the present time. A recent report, written twelve months after treatment began states that he has been

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completely free of any chest symptoms for several months and that he is extremely well, bright eyed, even tempered and very active. He has "all the appearance of a perfectly healthy child." Emotional disturbances no longer cause attacks and being close to horses has caused no reactions.

It is quite possible of course, that this boy could have reached the same state of health in the course of time by inhalation treatment alone as so many others have done in the last two or three years. But opening the antra caused him no distress of any kind and, without it, it is doubtful whether he could have got so completely well so soon.

It is however, the results obtained in children who have been treated without any preliminary hospitalization or the opening of antra which most clearly illustrate the benefits to be derived from the clearing up of nasal catarrh in asthma and the importance of the part played in this condition by repeated and neglected colds. These results are shown in the three case histories given in the following pages which are typical of those which have invariably been obtained in the children treated in this way.

The treatment is carried out by confining the patient to bed absolutely for three to four weeks with more or less continual inhalations and then carrying out the rule of treatment exactly as it is set out on page 60. This rule is based on the observation that the symptoms of ill health which accompany asthma are almost invariably secondary to the presence and absorption of chronic nasal discharge. Evidence for this has already been given and also for the facts which naturally follow that these symptoms disappear when the discharge ceases and return when it reappears. It therefore follows that any return or aggravation of these symptoms indicates an increased amount of nasal discharge and the presence of what, for the purpose of this treatment, is called a "cold." This is so even although this increase in the amount of nasal discharge may not be discernible in itself.

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As it is essential however, that the treatment should always be started as early as possible and not delayed while the mother is making up her mind whether the symptoms actually arise from catarrh or not it has been found necessary to tell the mother to put the child to bed on inhalation treatment the moment it seems to be or to look in any way off-colour. In this way treatment for any cold is begun immediately and less time is needed in bed. At the same time no increase in catarrh however small will be overlooked. This is highly important in the early stages of treatment as it is by stopping each small cold promptly and completely in the early stages that the length of convalescence is curtailed. If occasionally (and in actual practice it has been found to be extremely infrequent) it should so happen that the child is put to bed for a day or two unnecessarily on account of this procedure no harm is done. It serves to impress the rule of treatment on the parents and any effects on the child can be only for its own good.

The inhalations are given in a child's size mask similar to that of one described on page 75. The mixture is placed in the

the inhalation is never too strong as the mask is in close proximity to the nose. A wise precaution is to see that none of the mixture is spilt on any part of the mask that comes in contact with the skin as it may cause a certain amount of irritation. The two or three drops of the mixture usually need replenishing two or perhaps three times a day. Whenever the wool in the mask becomes soiled it can be replaced. In carrying out the treatment the mask is put on the child in the morning and removed for meals. When at a later period the child is up and dressed it can be worn in the house if necessary and without any ill-effects.

Careful instructions must be given about the position of the patient's bed in relation to draughts. It is advisable to

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draw a sketch of the four walls of the room giving the location of doors, windows or any fireplace and then to mark a place for the bed in some part of the room not directly between any of these openings. Warnings should also be given that other people in the house who may have colds should keep away from the patient and visitors should be excluded as far as possible.

The child is then sent home to bed and is not usually seen again for several months. The treatment is supervised by means of the mother's reports of the child's progress given by telephone and at first, every two or three days, later, at longer intervals to be arranged. Supervision in this way is essential as it is never sufficient to instruct parents in the manner in which colds are to be treated and then to leave them to do it for themselves. So many things arise which they overlook completely and it often takes many weeks in spite of the most emphatic instructions, before they grasp the principle of treatment.

In all other respects the treatment is carried out in exactly the same way as has already been described in the treatment of asthma the same small difficulties are encountered and similar results obtained.

condition more or less unchanged and apart from a change of climate, very little further treatment is ever suggested. A routine treatment of colds without the prolonged stay in bed needed for asthma has been highly successful in these cases as the following case history, typical of the many who have been treated in this way, will show.

"V R", aged 4 years, was first seen towards the end of 1946. She had been suffering from repeated colds, three or four of which had been treated recently with sulpha drugs

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Her mother was worried as these colds were becoming increasingly frequent and persistent and the child had a marked degree of deafness with each of them although it cleared up in between. Her tonsils and adenoids had been removed 10 months before. Her skin was very pasty her eyes heavy looking she had marked nasal obstruction and frequently a husky voice. She was more inclined to hold on to her mother's skirt than to play with other children. She was very thin had a poor appetite and a marked faddiness about food. She also suffered from enuresis which had been more troublesome in the previous twelve months.

Inhalation treatment was begun and she spent four weeks in bed. She had two colds during the next three months both of which were promptly treated by inhalations and confinement to bed for about ten days on each occasion. She had no further colds for six months and then developed one which was promptly treated and produced no sign of deafness. The next cold occurred six months later. It was neglected to begin with and the child was deaf for two days. This cold was then completely cleared up by treatment in bed and she has had no colds since and no signs of deafness have been noticed. When seen quite recently nearly two years after treatment began she had clear eyes and a healthy colour and looked perfectly strong and well. She had an excellent appetite had put on a lot of weight and as her mother said was continually on the go. She had had no trouble with enuresis for over fifteen months and during that period she had had only the two colds already mentioned, although she was one of a large family all of whom suffered from them repeatedly.

Enuresis has been frequently observed in children suffering from nasal catarrh either with or without asthma. Although no exact figures were recorded of those who got better after treatment most of them are known to have got rid of this trouble once their nasal irritation and chronic absorption had been removed.

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The first asthmatic child treated in this same way was aged 2 years and 9 months. She was first seen early in 1945. She had suffered from asthma since the age of eight months and had been having very severe attacks about every three months with slighter attacks in between. The last three of these three monthly attacks had been so severe that hospital treatment was necessary on each occasion. She had always had repeated attacks of sneezing and a more or less continual cold.

She had had eczema since she was a baby, but it had been a little better recently. Any exertion caused coughing attacks and severe shortness of breath. Her appetite was poor, her skin extremely pasty and any excitement produced attacks of asthma. She could not sleep at any time on less than two pillows.

Her treatment began in March, 1945, and she was put to bed at home with dry inhalations for three and a half weeks. She was then reported to be very well and was up for nine days, but developed a cold and was back in bed for a month during which time she had slight attacks of asthma for two days. She was then up for thirty one days and back in bed for five days, then up for twelve days and in bed for eighteen. She was then free of colds for four weeks but was then back in bed for nineteen days with a cold and slight attacks of asthma on two occasions.

She was then up for six weeks and in bed for two weeks up for three weeks and back in bed for ten days during which she had another slight attack of asthma. She then had five months' freedom from any nose or chest trouble of any kind. During this period her appetite was reported to be excellent, her colour to be good, she was free of shortness of breath when riding her scooter or playing with other children and she could sleep comfortably on one pillow. She was then taken to the country for a holiday and caught a severe cold in the train coming home which brought on another attack of asthma.

This was her last attack and since then she has been feeling and looking very well. She has had an occasional cold but no further attacks of sneezing or wheezing and no noticeable shortness of breath on exertion. Quite recently she has had measles and it is said slight pneumonia but no sign of bronchial spasm.

This child took nine months to get well and during that time had six colds and spent seventeen weeks in bed getting them better. When she had her last attack of asthma after five months freedom from any sign of it it was as the result of a cold caught in the train going to the country and aggravated when returning home three weeks later. During the two years since then she has been free of all her former trouble and has had all the characteristics of a perfectly healthy child.

If the clearing up of a few colds in the early stages of treatment can produce these results it seems only reasonable to expect that the prompt treatment of any future colds (which have now become extremely occasional) will be quite sufficient to maintain this child in normal health indefinitely. Any return of her asthma attacks and of the ill health that went with them can take place only if these colds are neglected.

Another case treated in the same way was A.G. aged three years who was first seen in 1946. He had had his first attack of asthma following a cold when he was twelve months old and no further attacks till five months later. Since then the attacks had become increasingly frequent and more severe and during the last twelve to eighteen months they had occurred at intervals of one or two weeks.

Adrenaline injections which used to relieve these attacks immediately at first had had a diminishing effect. He had always suffered from frequent colds with repeated attacks of sneezing. He had a poor appetite and had always been restless at night. His mother said that she had been obliged

to be up with him every night for the previous twelve months or more

Exertion of any kind caused severe coughing attacks and marked shortness of breath which prevented him from playing with

looking

His skin

which his mother had never known to affect him Excitement nearly always caused attacks

Treatment began in November 1946 with confinement to bed for three weeks and continual dry inhalations. He was then up for seven days and in bed for eleven days with a cold and an occasional attack of asthma. Two months later his mother reported that he had been in bed twice during that period with slight colds and slight asthma. He had however been having much better nights than he had ever had and was much less short of breath on exertion.

When seen twelve months later he was looking extremely well and had had no sign of asthma or wheezing during the previous six months and no attacks of sneezing or nasal obstruction. For many months he had been sleeping quietly each night with no disturbance to other members of the family. He was described as being very energetic, his irritability was gone and excitement no longer produced attacks. A recent report received twenty months after treatment began stated that this improvement has been fully maintained.

A number of children of somewhat similar ages have undergone this same treatment. Some of them have had excellent results quickly and the others have shown similar improvement but a little more slowly. A number of others have begun the treatment more recently and there is nothing to indicate that they will not all get similar results within a reasonably short time if the mothers continue to carry out the treatment correctly.

Typical of these children who are still in the early months of treatment is a child of five years who, when first seen, had had asthma for fifteen months. The attacks were

usually at night, with a persistent cough, which was particularly troublesome at night. Her appetite was poor, she frequently complained of feeling of nausea and was very faddy about her food.

Strong winds produced attacks and so did proximity to dogs against which she had had a series of injections over a period of eight months. She was a little short of breath on exertion but could play with other children except towards evening when much running about caused shortness of breath and asthma.

X ray showed both antra to be dull. They had already been washed out twice.

Treatment began six months ago, the child being put to bed with the dry inhalation and kept there for four weeks. Several people in the house had colds during this period, but the patient had only one slight attack of asthma. She was

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there had been no necessity for the parents to get up to look after her. She then caught another cold and was back in bed for eight days and had one attack of asthma.

When seen recently, six months after treatment began, the child looked perfectly healthy. She had had no since the slight attack of asthma noted above, her was excellent with no faddiness about food at

at night was gone and she had put on weight. Winds or excitement no longer produced attacks and her pet dog apparently caused her no trouble. She still slept quietly each night.

Disturbed nights with consequent disturbance of the parents who have to get up to attend to them are repeatedly complained of in asthmatic children. They are frequently caused by the asthma attacks and perhaps more frequently by the repeated coughing attacks which so often trouble these children at night. There is also a general restlessness which seems to result from the continual absorption of nasal discharge. After a few weeks treatment this restlessness and the coughing attacks almost invariably disappear. As the asthma attacks are also brought under control at the same time peaceful nights for the whole family are one of the results of treatment upon which the parents first remark.

The fact that children who suffer from asthma can be got better in this manner is a matter of the utmost importance. The treatment is extremely simple as no hospitalization is necessary. But even in those cases in which it has been thought that the antra should be opened the surgical procedure involved is also simple. Children undergoing it have shown no indication of post operative pain or distress and in young children in whom no attempt is made to carry out antral lavage it is often doubtful whether the child has been aware that anything has been done.

In older children antral lavage is not painful although occasionally it may at first be frightening. Where there has been any resistance to its performance no attempt has been made to continue it.

Complications of any kind in young children as the result of operation have been extremely rare and the mortality has been nil. In comparison with the removal of tonsils which practically all parents have been accustomed to regard as a necessity for children the opening of antra in the

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manner herein described is an undertaking of the utmost simplicity. The distress which follows it and the risk of subsequent complications or mortality are not comparable.

Young children who have had no preliminary operation do not experience of course any distress or run any risk at all. *All those treated in this way seem to have obtained quite as beneficial results as those who had their antra opened.* But up to what age satisfactory results can be obtained by inhalation treatment alone and exactly what degree of gross antral infection in young children needs surgical treatment to procure such results is in consequence of the comparatively limited number of cases so far treated in this way, not yet known.

With children, the time spent in bed in the early stage of treatment matters little and is of no real importance at all in comparison with the years of bed treatment and suffering which can otherwise be expected if asthma is allowed to persist. Any difficulty that is occasionally found in keeping children in bed is soon overcome and is a minor inconvenience for any mother who knows she can by overcoming it, have a reasonable hope of getting her child better.

And these children do get better. The case histories cited above go a long way towards demonstrating this. They do not show what happened to an occasional child who chanced to get better but are typical of the results obtained in practically all who have been treated. They give some indication of the severity of the disabilities from which the children suffered and the amount of time necessary for them to spend in bed to get the required results. And having arrived at that stage all observations made in the past support the conviction that their asthma will not return except as the result of a cold which their parents or when they are older they themselves neglect.

It must be emphasised once again however (and it cannot be emphasised too often) that it is not sufficient in view of

the present day attitude to colds to simply advise mothers to stop their children's colds in order to get them well. Some systematic control of the treatment by the physician is essential.

The parents must be taught the necessity of stopping colds and of stopping them promptly and completely. And they must be morally supported in their efforts to do so. The physician's authority is necessary to counteract the almost universal conviction that colds do not matter to combat the repeated assertion that no matter what trouble is gone to asthma is still incurable and to refute that most pernicious doctrine that asthma in children is not really important as they will probably grow out of it as they grow older—with the mention of some magic number of years such as seven or some multiple of it. The statement that children have every likelihood of growing out of asthma is not true.

The prompt and complete clearing up of each cold in any child who suffers from asthma is essential. Mothers must be taught it and in turn must teach it to the child. It should be begun at the earliest age as when properly carried out it will be found to be so effective that further treatment for the asthma attacks or the ill health which accompanies them will rarely be required.

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Since the foregoing pages were written a number of children up to the age of thirteen years have recently undergone this modified form of treatment and the results obtained in the first forty of them have been quite as satisfactory as those already described. The average child who is being referred for treatment has a pasty complexion and heavy looking eyes usually with darkish rings beneath them. He mostly breathes through his mouth uses his handkerchief frequently or snuffles showing the need for it and has habits which indicate a well marked post nasal discharge. His disturbed sleep generally gets his parents up

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night after night to look after him. He has a poor and variable appetite, is faddy about his food, certain articles of which he avoids, complains from time to time of nausea and is usually underweight. He is short of breath on exertion and so cannot play with other children on equal terms, if at all, and is "nervy" and frequently irritable. Often, but not always, there is a history of infantile eczema, of hives and of paroxysmal sneezing. His asthma attacks sometimes occur nightly, sometimes weekly or monthly and sometimes there is the history that they are getting more frequent and more severe, and at other times that they are less troublesome than they used to be. His parents have generally tried various forms of treatment for him, have resigned themselves to his condition and have frequently fallen back on the rather forlorn hope that he will some day grow out of it.

These symptoms are present in all cases in varying degrees of intensity, although all asthma children do not at first sight, look as sick as this picture denotes. But the majority do, and many look extremely ill. These symptoms are not due to the asthma attacks themselves but to some central cause, and no treatment can be considered satisfactory which does not clear them all alike. A treatment for asthma which merely lessens the frequency and severity of the attacks can be regarded with no more satisfaction than a treatment for persistent headaches would be in which the sole result was some amelioration of the pain.

These children have been treated in their own homes by confinement to bed and continued inhalations similar to those already described, given by means of the infra nasal mask mentioned on page 25. The average time first spent in bed has been three to four weeks although occasionally it has been a day or two less than this and at other times two or three days more. They have then been allowed up and returned to bed for a few days when necessary.

to clear up each subsequent cold promptly and completely. In the light of our present knowledge most of them would undoubtedly be diagnosed as allergic and would be and already have been, treated accordingly their repeated colds being regarded as attacks of allergic rhinitis. But in this treatment these recurrent attacks of rhinitis were regarded as colds as the acute exacerbations of a chronic nasal infection and were treated as such and the response to treatment has been the same in all cases.

The circumstances under which many of these treatments have been carried out have been far from ideal—in poor and overcrowded homes and sometimes in crowded rooms where various members of the family have also been subject to repeated or more or less continual colds. The improvement made by some in the first few weeks of treatment has been little less than astounding to their parents in a few others it has been somewhat delayed. All however have shown very definite improvement and nearly all by now are practically well. This means that at the end of a few months the average child has a good colour and clear eyes breathes freely through his nose sleeps quietly at night without disturbing other members of the household has a good appetite with no nausea and no faddiness is back to normal weight is no longer short of breath on exertion and his nerviness is gone. His paroxysmal sneezing and asthma attacks have grown less and less severe as the chronic irritation of the nasal discharge has been lessened and the various irritants which previously precipitated attacks seem no longer sufficiently irritating in themselves to do so. From what has been observed from the numerous cases which have undergone similar treatment in the past and have made similar progress there seems to be every reason to expect that these attacks will soon be completely gone. The child's future will then depend on how well he can be taught to deal with subsequent colds. All past experience indicates that most of them will soon reach a permanent stage of

normal health and freedom from asthma—permanent, that is, as long as they can be taught the necessity of clearing up, promptly and completely, each of what will soon become very occasional colds, and will continue to go on doing so

The average time taken by these children to get well in this way and to clear up their nasal infection sufficiently to ensure some resistance against future colds, has been four to six months. Two factors have been found to play an important part in determining this length of time, the first of which is the amount of co-operation that can be obtained in getting the treatment carried out. In this respect, an intelligent mother is invaluable. The second is the patient's inherent resistance to nasal infection which varies from person to person. It is a matter of common experience that some people can throw off colds in a few days while others with similar colds and apparently no greater susceptibility to them, take very much longer to do so.

During this convalescent period, the child has been kept away from school (the education being carried on by the Correspondence School) and has been definitely 'coddled.' No harmful effects have been noted from this coddling and none could be imagined that could be of any importance in comparison with the psychological benefits to be derived from getting the child back to health.

Supervision and continued control of this treatment itself is always necessary. Confinement to bed with colds to which most people strongly object, is required, and strict adherence to the rule of treatment mentioned on page 60 needs continued supervision to see that it is done. This rule must be carefully explained to the parents and the need for them to carry it out exactly must be insisted upon. It is also necessary to point out to them that if the elimination of nasal infection removes the symptoms from which

patient formerly suffered, any return or aggravation of these symptoms must indicate the presence of more, or a more irritating nasal discharge even at a stage when this increase is not noticeable in itself. A useful indication of the onset of colds is often thus presented and, if acted upon immediately, the length of time spent in bed treatment is very appreciably curtailed. Taking as an example the pasty face and heavy looking eyes already mentioned as being so characteristic of chronic nasal infection and present to some degree, at least in all cases of asthma, no matter what improvement may be shown as a result of treatment, it is never considered to be satisfactory till the patient has a healthy appearance. So in the early months of treatment the mere fact of looking off colour is insisted upon as being a sufficient reason for returning the child to bed, and although, at times, this may have seemed to have been an excess of caution on most occasions it has been extremely useful in helping to get the child better within a reasonable time. The insistence on regular reports is a highly important aid to getting the treatment carried out exactly. Simple as the rule of treatment is and in spite of the care with which it is explained before treatment is begun it is often only as the result of the frequent reports given by those looking after the patient and the repeated opportunities thus presented to point out what it means that many people can be got to see exactly what is needed. It is a matter of continual surprise how many, after the first few weeks, will say that they are only then beginning to understand what is required.

Little as such a procedure can be expected to appeal to members of an overworked profession, the facts that have been observed are set out here with the firm conviction that they show that the first indication for treatment in all asthmatic children is the elimination of chronic nasal infection and that when this is done very little other treat

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From the continued observation of children suffering from asthma, no hesitation is felt in saying in conclusion that the main cause of their disabilities is chronic nasal infection arising from the almost universal habit of neglecting colds, that any treatment that will remove this chronic infection and control subsequent colds sufficiently to keep it from recurring (as this treatment, when carried out with reasonable exactness, will undoubtedly do) will relieve them of their general ill health, and that while remaining free of infection in this way no child has been known to have had a recurrence of his attacks of sneezing and asthma notwithstanding the previous duration frequency or severity of these attacks or whatever may have been the allergic conditions which accompanied them

CASE HISTORIES

The following case histories are given to exemplify the types of cases that were treated, the length of time it took to get them better, and the connection between the amount of co operation they were prepared to give in clearing up their catarrh and the results achieved.

The first six are histories of severe and to a large degree, incapacitating cases of asthma which have been under observation for four to five years. Numbers 1 and 2 got better, and did so in a reasonably short time. Numbers 3 and 4 obtained the same results but took a rather longer time to do so. Numbers 5 and 6 also got better but not to the same extent, or to the extent they might have if they had been prepared to co-operate more fully.

The next four, who have been under treatment for about eighteen months, illustrate the results ordinarily obtained in the average case of asthma. Of this four numbers 7, 8 and 9 got better in a reasonably short time and number 10 who did not co-operate so fully is very much improved but is not really well yet.

The next two cases suffered from severe asthma and got well and then erred in their treatment. Number 11 who has been under observation for over four years neglected a cold, and with the next cold her asthma returned. Number 12, who has been under treatment for eighteen months, neglected a "return of her former symptoms" and so developed a severe cold and asthma. Each corrected her mistake immediately and has been quite well since.

Number 13 illustrates the results obtained in people suffering from severe asthma and who cannot live by the

When living inland the patient still had asthma though not so severely but after treatment she was able to return to her home on the coast and had no further attacks while living there

Case number 14 shows the typical results obtained in bronchiectasis when chronic nasal catarrh is cleared up. This patient got no better as the result of nasal operation but returned to normal health when his colds were brought under control

Case history number 15 shows a case of asthma and vaso motor rhinitis which has been under observation for four years. This patient also had extreme nasal obstruction which was attributed to a marked septal deformity and was waiting to reach a suitable age for a plastic operation to relieve his breathing. As a result of clearing up his catarrh however he is now quite well and his nasal breathing perfectly free

Numbers 16 17 and 18 are typical of everyday cases of chronic nasal catarrh. They illustrate the chronic ill health which arises from that condition and the relief that can be obtained by clearing it up

Of these eighteen patients whose histories are given fourteen lived and continued to live while under treatment in the low lying areas around Sydney already mentioned on page 86 which are regarded as being particularly conducive to catarrhal conditions. In all of them the localities were less than one hundred feet above sea level and in five of them numbers 2 3 4 5 and 7, they were less than fifty feet

Case History No 1

A D aged 63 years, was referred in September 1943 with a note from the doctor who had been treating her for the previous eighteen months with weekly injections prescribed as the result of skin tests saying that the patient was having attacks every day and all the year round and was

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getting steadily worse." Her history showed that she had been suffering from chronic bronchitis for twenty years and from asthma attacks for seventeen.

When first seen, her asthma attacks were more or less continual but were worse at night and after each meal. She suffered from repeated colds, a stuffed up nose and profuse nasal discharge, which used to be highly offensive to the patient until three or four years previously when she had completely lost her sense of smell. Her appetite was fair and she complained of repeated attacks of nausea.

Any exertion such as walking up stairs to her bedroom, caused marked shortness of breath. Her asthma attacks were always worse in the hot weather and were invariably precipitated by dust, westerly winds, pineapples and eggs. She had been receiving the invalid pension because of her disabilities, for a number of years.

Her treatment began in September 1943. She returned home from hospital at the end of two weeks and was in bed with a cold and some asthma for a further four weeks. She was then up most of the time for the next three weeks but stayed in bed inhaling on the days when the weather was bad.

Three months later her family reported that although she had had no attacks of asthma for three or four weeks she had had several attacks of bronchial wheezing. She could not then walk up stairs and sit practically anything without ill effects. She continued to carry out the treatment reasonably well although she side stepped it as her family said, whenever she could.

Twelve months after treatment began her wheezing which had always been constant was completely gone. Dust, food and wind no longer affected her and she could walk up stairs without any distress. Her nose was quite clear and she said that her sense of smell had returned to normal.

At the end of a further twelve months, she reported that this improvement had been fully maintained. She had then had no asthma for nearly eighteen months and had increased her weight by thirty pounds. Her last report, some twelve months after this, said that she was still free of asthma and wheezing, and felt extremely well.

Case History No. 2

"G R", aged 27 years, was first seen in August, 1943. His doctor referred him as a particularly severe case of asthma, whom he had lately been visiting night after night and whom he had never seen in bed, but always sitting in a chair, gasping for breath. Adrenaline was losing its effects, but morphia controlled the attacks for about four hours. He had frequently to give him two injections of it a day. His mother stated that the patient had had asthma since a baby and even in those days the attacks were extremely severe and distressing.

He had been a little better about three years previously and had then joined the Army, but had been invalided out with asthma after a few months' service. Dust, flowers, excitement and certain articles of food always caused attacks. He slept on a rubber mattress and was always propped up on three to four pillows. He had sought relief by various treatments, including injections of specific allergens, but his condition had never shown any real improvement.

He was extremely short of breath on exertion and used to have repeated attacks of sneezing although they had been less severe during the previous two years. He also had repeated colds and a very blocked nose with a lot of offensive discharge.

His treatment began in August, 1943. He went home from hospital at the end of two weeks and had two or three light colds with some asthma, but no attacks that could not

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be relieved immediately with an adrenaline spray. At the end of ten weeks he was feeling very much better and was sleeping on an ordinary mattress with only one pillow which he had not been able to do for many years. He then had some highly distressing domestic worries which aggravated his asthma to some extent but to nothing like the same degree that worry had always done before treatment.

At the end of four months he returned to work.

Twelve months later he reported that he had been very well in the interval with very little asthma and none at all during the last nine months. He had been in constant work during that period and as a lorry driver had got thoroughly wet on occasions in bad weather with no opportunity of changing into dry clothes but even so had suffered very little ill effects.

When seen eight months later this improvement was fully maintained. He stated that he could run and box and swim without any undue shortness of breath. He had changed his occupation and was then regularly engaged in particularly heavy work which he could not have attempted before.

When last seen four years after treatment had begun he was in excellent health and had been so as he said for at least three and a half years. Both he and his mother maintained that he had had no signs of asthma since a severe cold which he had grossly neglected two years previously. This had been accompanied by one slight attack. When that occurred he went to bed, cleared up this cold completely and had had no chest symptoms since.

Case History No 3

J M. aged 19 years was first seen in 1943. He had had asthma attacks since four years of age and they had been gradually getting more frequent and more severe. For

for fourteen, then up for seven days and in bed again for nine. She was then up for five days but caught a severe cold and was back in bed with bronchitis and asthma for twenty-five days. She was then up for nine days, in bed for seven and then up for three weeks. During this period she reported that she was extremely well and had had no asthma with menstruation for the first time for years. She then caught another cold with severe bronchitis and slight asthma, and was in bed for eleven days. She has had no attacks of asthma since.

During the next three months, she had two colds with some bronchitis.

At the end of her own house

nose was then quite clear to breathe through and flowers no longer affected her. She had gained seven pounds in weight and said she was feeling, and she certainly was looking, 'wonderfully well'.

Since then she has reported an occasional cold sometimes associated with slight wheezing but with no return of asthma. When last seen three and a half years after her treatment began, she was well in every way and said that she had 'never felt so well in her life before'.

Case History No. 5

"C A., aged 61 years, was specially referred to the Clinic in March, 1944, as a patient who had never responded to any treatment. She gave the history of having had asthma for seventeen years. The attacks were getting more frequent and more severe and she had had attacks practically every night for the previous eighteen months sometimes requiring four to five injections of adrenaline to relieve them.

Colds had not been frequent in the past but had been more so since pneumonia twelve months previously. During this twelve months she had had a lot of nasal discharge requiring

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the use of half a dozen handkerchiefs a day. She had had severe headaches practically every day for several years, and also a troublesome drug rash. She also complained of chronic indigestion and persistent coughing attacks at night. She was thin and looked extremely sick. Bananas and poppies produced attacks and so did any emotional upset.

X ray showed her nasal sinuses to be clear.

Her treatment began in March 1944. On returning home from hospital she was in bed for two and a half weeks with some asthma. Then she was up for a couple of days and in bed again for three weeks. It is difficult to estimate how much time she spent in bed during the first four months as she repeatedly had signs of a cold with some asthma which she was known to treat in bed for a day or two and then get up without any report to the Clinic.

cough and very little perspiring. A month later he reported that he was still more improved and had returned to work.

A number of reports were received from him during the next few months to say that he was feeling particularly well with no trouble of any kind.

When last seen fifteen months after treatment had begun he said that he had never felt so well in his life as he had during the previous twelve months. He had had no attacks of sneezing, no colds, no cough and no chest symptoms. He was no longer short of breath, tired or nervy and he had not lost a day's work since returning to it twelve months before.

Case History No. 9

C.H. aged 32 years lived in the country and was first seen in February 1947. He gave the history of having had asthma since he was twelve years of age with the attacks getting more frequent and more severe. He had had attacks every night for the previous four months. As an infant he had had croup followed by repeated attacks of bronchitis. He had always been subject to paroxysmal sneezing but very much more so during the previous four years.

He had had repeated colds for many years with marked nasal obstruction and a troublesome cough with a lot of expectoration at night. He always slept on three pillows. He had repeated stomach trouble with pain and heartburn and had been told that he had a duodenal ulcer for which he was on a special diet. Dust and strong winds always produced attacks and he always felt sick when travelling in cars. He was very short of breath on exertion, was always tired and extremely irritable and his skin looked very pasty. He had had skin tests followed by a series of weekly injections at intervals over a period of two years.

His treatment began in March 1947.

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On returning home after two weeks in hospital he spent the greater part of the next three months in bed with a succession of colds and repeated attacks of asthma. At the end of that time, he was looking and feeling better, his nose was much clearer and his gastric troubles much improved. He then returned to the country and was in bed for ten days with a cold caught whilst travelling there in a train.

Four weeks later, he reported that he was back at work and was feeling very well. His sneezing attacks were gone, his appetite was much improved, he was no longer on a diet and could eat what he liked without ill effects. He had increased his weight by ten pounds. A further report a month later stated that he had gained another four pounds.

He had another cold, accompanied by slight asthma seven months after returning to the country and he was in bed for ten days. This is the only time he has lost from work since going home fifteen months ago and the only sign of asthma he has had. He reported recently that he is well in every way, that he has better health than he has had for many years, and that his gastric symptoms have entirely disappeared.

Case History No. 10

'S K', aged 41 years, was first seen in July, 1947. She had suffered from repeated attacks of bronchitis for fifteen years and from asthma for ten years. Her asthma attacks occurred about every two weeks and lasted two to three days and they were steadily getting more severe and more prolonged. She used to get repeated colds and severe attacks of sneezing but not during the previous five years.

She had well marked nasal obstruction, but did not notice any nasal discharge. Her cough was particularly troublesome at night. She was always worse in humid weather and with any emotional upset. She stated that she was very "nervy" very short of breath on exertion and always felt too tired for her daily work. She had been steadily losing weight for the previous twelve to eighteen months.

On examination she had small polyps in both nostrils

Her treatment began in July 1947. On returning home from hospital she was in bed for two weeks. During this time she had a cold but no chest symptoms and was then up for seven days and said that she felt really splendid. She then caught a cold followed by severe bronchitis and some asthma and was in bed for three weeks.

She was then up for four weeks in bed for five days then up for three days and in bed for ten.

During the first four months there were repeated colds in the house and the patient accordingly had more or less continual colds with repeated attacks of bronchitis but very little asthma. At the end of this period she reported that she was sleeping better and her appetite was much improved.

A few days later she was in bed again with a cold and severe bronchitis and occasional slight attacks of asthma. She was then up for a few days and back in bed for a further thirteen days with bronchitis and one slight attack of asthma. She was then up for six weeks and reported that she felt a different person.

Her appetite was then excellent she was putting on weight and was no longer affected by excitement and was much less nervy. During the last six months she has had one slight cold with a little wheezing but no further signs of bronchial spasm.

Case History No 11

T F aged 24 years was referred to the Clinic by her physician at the beginning of 1944 as a patient whose general health and asthma attacks were a cause of considerable concern. She had had asthma since six years of age and repeated attacks of bronchitis since a baby. She had had marked nasal obstruction and repeated colds all her life. She had used eight to ten handkerchiefs a day for several years and they were always very soiled. She had

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had headaches every two to three weeks lasting from three to four days and often sufficiently severe to keep her from going to work. Her asthma attacks had been very severe as a child and occurred sometimes every two weeks and sometimes two or three times a week. Four years ago her antra had been opened intra nasally and her asthma during the next twelve months was somewhat better. Since then however, it had been getting gradually worse and had been more frequent and severe in the last twelve months than it had ever been.

Her appetite was fairly good but she was very faddy about her food. She was always tired and very short of breath on exertion her skin was very pasty and her eyes heavy looking and she had lost a lot of time from work each year on account of her general ill health.

Dust always produced troublesome sneezing attacks followed by asthma as also did many flowers of which frangipanni was the most noticeable. It grew in a garden further along the street in which she lived and when it was out in blossom and the wind blew in her direction it always caused attacks.

Her treatment began in February 1944. As her antra were still open, no operation was necessary and she was kept in hospital on inhalation treatment only and then taken home in an ambulance. She had a number of colds with slight asthma attacks during the first three months. She was then free of trouble for two weeks and then began again for two weeks with another slight attack of asthma. She then returned to work and a month later reported that she felt a different person and said that she had never felt so well in her life before. Her nose was clear and she was using one and never more than two handkerchiefs a day.

Ten months after treatment had begun she reported that her nose was quite clear her headaches were gone that she

BRONCHIAL ASTHMA

had had no asthma for several months and that dust and frangipanni no longer affected her

Three months later, it was reported that the patient had had a severe cold for two days and with it her first attack of asthma for eight months. On enquiry it transpired that she had had a cold ten days before but it had been neglected on account of sickness in the family which had prevented her from doing anything about it.

This cold was then cleared up completely and that was the last attack of asthma she has had. When seen five months later she was looking extremely well. She was no longer short of breath on exertion, had an excellent appetite, was not faddy about her food and her headaches were completely gone. She had lost no time from work in the previous twelve months except when treating the cold mentioned above and one other.

When seen recently four and a half years after treatment began she had had no further trouble. She was now married, did all her own housework and grew frangipanni in her own garden and when blossoms were available kept them constantly in

of asthma no trouble
no longer tired

previous fifteen years

that there had been no indication of any return of her former symptoms during that period.

Case History No 12

A.L. aged 25 years was first seen in January, 1947. She had had asthma attacks since she was five years of age, the first attack following whooping cough. During the last two years her attacks had been very much more frequent and more severe. She had been getting them every ten to fourteen days and they then continued day and night for three to four days. Adrenaline injections gave temporary

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relief She suffered from repeated colds and from severe headaches at least three or four days a week She had marked nasal obstruction and was an unmistakable mouth-breather She looked extremely sick with a very pasty skin and heavy looking eyes She weighed 6 stone 2 lbs

Her appetite was poor and she had repeated attacks of nausea with bilious attacks from time to time. Dust and worry always caused asthma attacks and they were always worse with colds. She said that she had had skin tests and repeated injections of specific allergens and had also been to various herbalists. She had tried every treatment without relief."

Her treatment began in February, 1947. She returned home from hospital at the end of two weeks and spent another two weeks in bed during which time she had two slight attacks of asthma. She was then up for two days and in bed for five with another cold and slight asthma. She was then up for eleven days and in bed for another five with further slight asthma.

She was then up for fifteen days. When seen a fortnight later she had a good colour and a clear skin and was breathing much more freely through her nose. She stated that she had had no asthma for four weeks, that her headaches were much better and that she felt extremely well. She had gained fourteen pounds in weight.

Three months later she was seen again. She then had a pasty skin and heavy looking eyes and much more difficulty in breathing through her nose. When asked why she had not gone to bed with her present symptoms, which were

she added in a day or two

When it was explained to her that her condition, including the tuberculous attack, was almost certainly the result of increased

nasal and post nasal discharge and that in accordance with the rule of treatment she should have gone to bed at once with any sign of the return of any of her former symptoms she undertook to go home and do so. The next day she reported that her cold was then quite definite and she was confined to bed for three weeks. During that time she had two attacks of asthma.

Those were the last attacks that she has had. A month later she had to go to the Mountains for two weeks because of domestic trouble but neither this worry nor the bad weather experienced there gave rise to any symptoms.

When seen recently eighteen months after her treatment began she was extremely well. She stated that she had had only one cold recently and that was several months ago but it had not been accompanied by chest symptoms of any kind. She could breathe freely through her nose, dust and worry no longer affected her and she had had no headaches for well over twelve months. Her weight was then over eight stone.

Case History No 13

S.C. aged 27 years was first seen in October 1943. As a child she lived in a coastal town of New South Wales and while there had repeated and severe attacks of asthma since seven years of age. As these attacks were not improving under treatment and she was losing a considerable amount of schooling on account of her ill health she was sent to live in the far West of the State. For four years after first arriving there her attacks were less frequent and less severe but they then became more troublesome and grew steadily worse. She had had repeated colds when living near the coast but only occasionally while in the country and her asthma was always worse after each cold. She did not notice any post nasal discharge. She had marked shortness of breath on exertion and could not join in outdoor games.

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lowing few weeks, he was taught to wash out his antra for himself and was repeatedly impressed with the necessity of going to bed with each cold and of staying there till all signs of it had disappeared—of carrying out in fact the routine treatment for nasal catarrh.

Three months later he reported that his cough was much improved, his phlegm much less in amount that lying on his back no longer caused coughing attacks and that he could sleep more comfortably on one pillow. Since then he has continued to go to bed on inhalation treatment with each cold and to stay there till it had completely cleared up.

When seen recently three years after his treatment was begun he reported that during the last two years he had been getting one or two slight colds a year but not nearly as frequently as the other members of the family that he still coughed up a very small amount of inoffensive phlegm occasionally. But that as a rule he would go for days at a time with no cough or phlegm at all that his nose had been quite clear that he had not been feeling tired or short of breath on exertion and that he had been able to do his day's work and play any games without any unusual distress.

His X ray report in 1948 was: "There is still advanced bronchiectasis at both bases. However the appearance suggests that there is rather less associated peri bronchial pneumonitis than at the previous X ray five years ago."

In spite of this lung condition all the usual distressing disabilities arising from bronchiectasis are gone. He can lead a perfectly normal life both at work and at play. As this had been achieved by clearing up his chronic nasal catarrh and the proper control of colds it is only reasonable to believe that if he continues to keep it clear by stopping now become a very occasional cold promptly and he will be able to keep free of his former definitely.

Case History No 14

J S aged 22 years suffered from bronchitis and bronchiectasis. He was first seen in 1945. He gave the history of having suffered from repeated attacks of bronchitis since childhood of diphtheria when seven years of age and of scarlet fever and double pneumonia when fourteen. After twelve weeks in hospital with these last mentioned ailments his chest condition was diagnosed as bronchiectasis.

He gave the further history of having usually had three to four colds each winter which were generally followed by bronchitis. He had severe attacks of coughing on first getting out of bed in the morning and at intervals throughout the day. These attacks were often brought on by laughter or exertion by dust or tobacco smoke and always by lying on his back. With these attacks he expectorated a lot of discoloured and offensive discharge which he also vomited frequently after meals.

An X ray in 1943 showed advanced bronchiectasis involving the lower lobes of both lungs.

Following this X ray his antra were washed out on several occasions and then opened intra nasally. No further treatment was advised. In the two years interval between when this was done and when he was first seen in 1945 his wheezing attacks had been growing more frequent and more pronounced and his phlegm more profuse and offensive. He slept each night propped up on three pillows. He was always tired, was very short of breath on any exertion and was unable to take part in the usual activities of his age. He had a marked degree of nasal obstruction.

As the antra were still open in 1945 there was no need for any further surgical procedure. As a beginning to his treatment he was sent to hospital and there confined to bed for two weeks with daily antral lavage and continual inhalations. He then returned home in an ambulance and stayed in bed inhaling for another two weeks. During the fol

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Fifteen months after treatment he was very well in every way and reported that he had been working regularly for several months. During the last few weeks of this period a large department of the store in which he worked had been renovated. He had worked in it continually during that period while fabrics and furniture had been moved from place to place with dust more or less continually in the air, but it had produced no sign of asthma or of any trouble at all.

During the last two and a half years he has been very well in every way with only an occasional slight cold and no chest symptoms of any kind. He has had no further paroxysms of sneezing and as a result of simply clearing up his nasal discharge his nasal breathing is now perfectly free.

Case History No. 16

A typical case of chronic catarrh which illustrates the symptoms complained of and the results obtained in the majority of the numerous patients who have been treated was 'L.H.' aged 39 years who was seen in 1947. She complained of nasal obstruction which had been particularly troublesome during the previous twelve years. She had more or less continual colds and frequent headaches which were gradually getting still more frequent and severe. These headaches were mostly frontal but recently had been occurring also at the back of her head and which is very characteristic of chronic antrum trouble behind her ears.

She had a lot of nasal discharge which used to be really offensive but recently she had had no sense of it. She had had a 'croupy' cough and noisy wheezing all day. Her appetite was poor with feelings of fullness at the stomach. She had very little inclination for breakfast on exertion and very easily tired and heavy looking eyes so frequently.

Case History No. 15

T J , aged 14 years, was referred as a severe case of visomotor rhinitis and asthma in February 1945. He gave the history of severe attacks of asthma about every two weeks with slight attacks in between. The attacks of both sneezing and asthma were invariably precipitated by dust and fly spray and were always aggravated by the three or four colds he developed each year.

He had marked nasal obstruction and suffered from repeated and troublesome paroxysms of sneezing several times a day. He had been attending a Hospital Out-door Department for several years for nose trouble. His septum was very thickened, obstructing both nostrils, and he was waiting till he had reached a suitable age to undergo a plastic operation to free his breathing. He was sent to the Clinic to see what could be done for him in the meantime.

X ray showed the nasal sinuses to be clear.

Treatment began in March 1945. On returning home from hospital he was in bed for three weeks with a cold and several attacks of asthma. He was then up for four days and in bed for another two weeks during which time he had several slight attacks of asthma. He was then up for five days and in bed for seven, then up for thirty days and in bed for another seven. He had no further colds for four months and was then reported as being marvellously well with an excellent appetite and no shortness of breath on exertion.

He could at this time breathe freely through his nose, dust no longer affected him, his sneezing attacks were gone and he could use a fly spray in a closed room without any ill effects. He then had another cold with some asthma and was in bed for nine days. He has had no attacks of asthma since.

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never felt fit for it. His nose had been examined and his antra had been washed out on various occasions, but no further treatment had been suggested. Examination of his nose revealed a lot of post nasal discharge and both antra were dark on transillumination.

His antra were opened in November, 1946. This was followed by the usual treatment for nasal catarrh, and he left hospital at the end of two weeks. When seen a week later, accompanied by his wife who bore out his statements, he said that he had had the 'first three weeks without headaches for years. His appetite had improved and he was able to enjoy a good breakfast. He felt much less tired and his feeling of misery was gone.

Three weeks later, he reported that he had had a cold and a little more nasal stuffiness and felt a little more tired which as was pointed out to him was the result of not having cleared up the cold completely. This he undertook to do.

Three months later he was very well with no gastric trouble, no shortness of breath on exertion, and no nasal obstruction. He was, however, getting a slight headache occasionally, and he was asked to make a special effort to clear up each future headache immediately with inhalations, no matter how mild it might happen to be. Some time later he reported that he had done this on several occasions and that his headaches were then gone.

When seen twelve months after treatment had begun, his colour was excellent, he was having no headaches, no gastric troubles and no trouble in breathing through his nose. He said that he no longer felt "fuddled" and sick, and was according to his own account in perfect health.

There can be no doubt that he will retain this health as long as he is prepared to clear up each occasional cold promptly and completely.

Her antra were opened in January 1947 and she was urged to carry out the routine treatment for catarrh.

When seen four weeks later she said that she had had no headaches of any kind in the previous two weeks and that her appetite and her sense of smell were very much improved. Six weeks later she reported that she had had only one headache and it was immediately relieved by inhalations. Seeing films which had always made her head ache before treatment no longer affected her. She said that she felt ever so much better and did not even get irritable now.

From then on she has not looked back. She has been practically free of headaches, has an excellent appetite, is full of energy and her nasal breathing and sense of smell are normal. She recently reported two small colds in the previous twelve months, both of which she had cleared up as required.

Case History No 17

H J, aged 47 years, was first seen in 1946. He complained of severe headaches which he said he had had practically all day and every day for the last fifteen years. They were to some extent frontal but mainly at the back of his head and neck. He had a lot of yellow nasal discharge throughout the day but it was particularly abundant in the early morning. He had marked nasal obstruction but as he said infrequent colds. He had occasional attacks of bronchitis.

His appetite was poor and he had repeated feelings of nausea especially in the morning and rarely felt inclined for breakfast. He had attacks of dizziness and occasional vomiting when the headaches were more than usually severe. He was very short of breath on exertion and said that he always felt tired and nervy and that his general feeling was one of misery. He was extremely sallow and said that he had been so for years. He had not lost much time from work on account of these disabilities but said that he

Case History No. 18

'L P', aged 42, was first seen in 1945. She complained of repeated attacks of sneezing which were aggravated by housework and accompanied by a watery nasal discharge. She always seemed to have a cold and used about three handkerchiefs a day. Her nasal breathing was obstructed and she had no sense of smell. She complained of a slight but constant cough and had had some wheezing during the previous twelve months but could sleep comfortably at night on one pillow. Lately, she had been having some slight attacks of dizziness. Her tongue was always "dirty". Her appetite was good and she ate a good breakfast, but she had feelings of nausea after all meals and repeated attacks of heartburn and flatulence. In addition, she had a pasty skin, puffiness under both eyes, and marked shortness of breath on excitement. She thought that her health was "gradually slipping".

On examination, her right middle turbinates and both posterior inferior turbinates were considerably enlarged. She also had a well-marked post nasal discharge and both antra were dark on transillumination.

At the time of this first consultation, the patient's child was undergoing this treatment for asthma, and the patient herself was not seen again for fifteen months, during which time she had been under medical treatment and had been ordered two long holidays in the country. She then complained that her gastric troubles had become very much worse and that her feelings of nausea were much more troublesome. She also complained of always feeling tired, nervy, irritable and depressed, and not fit for her household duties.

Her antra were opened in February, 1947 and she was asked to carry out the routine treatment for nasal catarrh. Five weeks later she said that she felt very much better, her

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